TAPR Spread Spectrum Special Interest Group Archive, January 2000 through December 2000

January 2000 through December 2000

TAPR's technical forum for applying spread-spectrum communications to amateur packet-radio networking, including chipsets and modems, Part 15 wireless LAN hardware, direct-sequence and frequency-hopping systems, CDMA, interference, shared spectrum, and development projects.

This volume contains 11 original monthly files and 651 messages, arranged chronologically. The PDF is a readable access copy: MIME transfer encodings are decoded, HTML bodies are converted to plain text, and non-text attachments are represented by descriptive notes. The raw source text is supplied separately with the Internet Archive item.

Month	Messages	Original source file
2000-01	56	ss.0001
2000-02	11	ss.0002
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2000-06	125	ss.0006
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2000-08	58	ss.0008
2000-09	38	ss.0009
2000-10	103	ss.0010
2000-11	37	ss.0011
2000-12	11	ss.0012

January 2000

Original source file: ss.0001
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0001

1. [ss] FHSS Radio Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 5 Jan 2000 19:29:16 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58478-2000.01.05-19.45.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.tapr.org/tapr/html/Ftaprfhss.html

TAPR 900MHz FHSS Radio Design Update
January 1st, 2000

A digital board design review was held January 1st, 2000 in Dallas, Texas.

Attending the meeting:

* Greg Jones
* Steve Bible (Conference Call)
* John Schoreder
* Bob Stricklin
* John Koster

1. PIC Code
The meeting started with a conference call made to
Steve Bible regarding the current status of the PIC chip for the
RF board. Steve reports that his is about completed with the
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complete the project. Discussion covered the table look up issues
and we would send the information regarding the double indexed
look up table as soon as possible. Steve feels he will be ready
when the RF boards are available for testing.

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Testing The group discussed testing of the RF board
and PIC chip. John S will post information that was discussed on
testing the RF board. The group agreed that the most effective way
would be to lift two pins on the PIC chip and connect a Max232
interface board to allow a program to simulate the SPI calls that
the controller board would provide.

3. Digital Board Schematic Review
The digital schematic was reviewed.
The group proceeded to move through the list of issues
to be covered on the digital board. A lot of the changes took
place on the new circuits required to support the new Lvl1
Ethernet interface chip we are changing to. Changes made as a
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reflect the additional changes or information needed. Once these
items are provided and solved we should be able to send the
schematic capture to Steve L for layout to begin.

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Steve L will be sending the cadence files to David C
and John S for final review before the next board run/fab takes
place. John S requested further information from Steve L regarding
the state of the RF boards that will be delivered for testing, so
that he and David could begin to develop necessary test equipment
interfaces.

Summary

Overall the project proceeds well. We had hoped to have the
current version of the RF Board in alpha testing before January
1st, but with the additional changes in parts on the board (to help
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fabrication the digital board will be starting into the layout

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to come out about the time we have the RF board testing completed.
This is the plan for now.

Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ
85749-9399. Phone: (940) 383-0000. Fax: (940) 566-2544.
Internet: TAPR@TAPR.ORG

Greg Jones, WD5IVD, wd5ivd@tapr.org

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] Re: FHSS Radio Update

From: "C Byers" <crlbyers@garlic.com>
Date: Wed, 5 Jan 2000 20:48:25 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58533-2000.01.05-23.04.05--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Great work !

I'm hoping we will soon be able to use the system to improve the SF Bay Area
Packet network, and for my satellite gateway.
73's de Carol, W9HGI

----- Original Message -----
From: Greg Jones <wd5ivd@tapr.org>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Sent: Wednesday, January 05, 2000 5:29 PM
Subject: [ss] FHSS Radio Update

> http://www.tapr.org/tapr/html/Ftaprfhss.html
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> You are currently subscribed to ss as: CRLBYERS@GARLIC.COM
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3. [ss] TAPR conflict of interest? (Was Re: FHSS Radio Update)

From: Jeff King <jeff@aerodata.net>
Date: Thu, 06 Jan 2000 03:14:34 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58568-2000.01.06-02.30.01--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

C Byers wrote:

> Great work !

There is no doubt about that.

However, I had hoped to see more detail about the Dandin Group SS radio licensing deal in the last PSR and/or with this posting. Still nothing even though I know a few others besides myself have questioned the Dandin Group deal.

Will the Dandin deal limit third party licensing of the SS radio? It was my impression that the SS radio would be licensed in much the same manner as the TAPR TNC2. Is this still the case or is this an exclusive deal only with Dandin? I for one had hoped to have the opportunity to be able to license the TAPR SS radio for my company. And in TAPR's most recent membership poll (Winter 1996 PSR), the membership overwhelmingly disapproved of exclusive licensing deals....they limit competition and lead to higher prices for all . Has the BOD gone against the wishes of the membership in approving this deal? (assuming it is an exclusive license)

What are the qualifications of the Dandin group? This takes an even greater importance if TAPR has exclusively licensed the SS radio to the Dandin group. Do they have the funds to develop this? A sensible

marketing and production plan? We all know about the TNC2 deal...
some TNC2 licenses did good (MFJ, Paccomm), will others (GLB,
DRSI, AEA) failed. But that was the beauty of the non-exclusive
TNC2 license....not only was TAPR not tied to one manufacturer,
it also increased competition and made the TNC affordable. How
will the Dandin deal do this with the SS radio if it is exclusive? (which
I don't know if it is)

And then the matter of officers/appointees of TAPR also simultaneously being
part of the Dandin group should be fully explained/disclosed to the membership
See: http://www.dandin.com/group.html Yes, I know some BOD members
wrote me privately saying "it was a good deal" and to trust them but
the fact this has not been publicly disclosed to the membership
is disturbing. And I am told the May 1999 BOD meeting minutes have
yet to be reduced to writing/made available. This meeting is where I am
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I've found in life its better to fully address/disclose things
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Just my thoughts. I'm sorry if this offended anyone on the list, being
it was non-techical (but did relate to the SS radio). I think we as
members need to monitor our organization. Hopefully, TAPR will release
more details on the Dandin Deal so that members that don't believe
in "faith" but in facts can feel secure that this deal was in the best
long term interest of TAPR's membership.

-Jeff

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4. [ss] Is the the FHSS radio obsolete by now?

From: Johan <johan@rodent.unixville.com>
Date: Thu, 6 Jan 2000 04:16:50 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58610-2000.01.06-08.40.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Considering that there are many cheap 11 Mbps wireless ethernet solutions
available in the market is this radio obsolete? For example, Wavelan
WaveACCESS and AirEzy. The long distance range of these solutions, though
not quite there, also appear to compete with the 20 mile range of the TAPR
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later,
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You are currently subscribed to ss as: lyris.ss@tapr.org
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5. [ss] New to TAPR and SS Sig

From: Alan Desjardins <adesjard@cme.com>
Date: Thu, 6 Jan 2000 08:35:30 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58612-2000.01.06-08.58.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi There,

I'm new to the group, my call is N5VXL, and I work with the commercial

Part 15 SS radios in my work at the Chicago Mercantile Exchange. I have a
lot of interest in development of SS for Ham use, and if I can contribute
in any way to the success of the project I offer my assistance.

Alan
N5VXL

Alan P. DesJardins
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems Archetecture
30 South Wacker Drive
Chicago, IL 60606
(312)338-2853
adesjard@cme.com

-----Original Message-----
From: Jeff King [SMTP:jeff@aerodata.net]
Sent: Thursday, January 06, 2000 2:15 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] TAPR conflict of interest? (Was Re: FHSS Radio Update)

C Byers wrote:

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-Jeff

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---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: Is the the FHSS radio obsolete by now?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Thu, 6 Jan 2000 09:54:14 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58613-2000.01.06-09.10.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 6 Jan 2000, Johan wrote:

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> radio. AirEzy claims in their FAQ to get a range of 15 miles with a power
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the answer is is not a simple one. As I see it, when you deal with a
RF digital systems, you really have two subsystems. First is the RF
interface which deals with all of the issues relating to squirting
bits via RF and the second is the network interface which deals with
squirting bits via 10BaseT or some other interface. The cheap
wireless networking solutions only solve half of the problem which is
the RF side. The network interface still needs work.

Second, it's really really hard to get 11 Mb data rates at 20 miles.
The reality is you'll more likely see 0.5 to 1 Mb data rates. Still
respectable but not 11. Don't forget also that the 11 Mb data rate is
the raw bit rate and the real bit rate is more like seven Mb and then
you lose another 30 percent to protocol overhead. So an 11 Mb radio
gets you five Mb real bandwidth.

Third, these cheap wireless solutions work in the ISM bands. One of
the reasons for doing our own spread spectrum care is so that we have
a reason to keep access to the boat loads spectrum were not exactly
using at 900 MHz and up. If we can get by with using the ISM bands,
then there is no reason for us to keep exclusive ham bands
allocations.

Now, I believe it should be possible to re-engineer some of these
cheap wireless solutions to ham spectrum allocations but someone needs
to come up with the money to convince a company to do this. Unless of
course, there is a ham in one of these companies that is willing to
spend their own time advocating releasing reference designs or even
working on modifying the existing design to work in the ham radio
allocations.

once you have the radios, then have the whole issue of engineering
paths. It's not like VHF repeaters where you find a high point, pump
out a bunch of power and you can blanket the huge area with coverage.
I was fortunate enough to be able to gain access to a path analysis
program recently and I tried to figure out if there were any paths
between myself and a half a dozen nearby hams. Nearly everyone had
some form of obstacle between themselves and most of the group. This
tells me that if we were able to find a common high point, we would
still have serious problems with hidden transmitter issues unless we
were operating in classic repeater mode and able to use the repeaters
output as a way of managing collisions.

This is probably not new to folks with lots of packet radio experience
but I will say it was quite discouraging and highlights the importance
of complete network design and not just node design.

--- eric

Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
This message was composed almost entirely using NaturallySpeaking

---
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7. [ss] RE: Is the the FHSS radio obsolete by now?

From: "Walter Holmes" <walterh@houston-intranet.com>
Date: Thu, 6 Jan 2000 09:13:01 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58618-2000.01.06-09.30.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I agree completely......

  3 years ago when this was a hot idea, it made a LOT of sense. And ALL of
us were very excited to hear about the project. But given today's rapid
advances in technology, and sharp decline in prices for the same, perhaps
there would be a far better advantage to pick one of these off the shelf
technologies, standardize on them for compatibility reasons, and go forward
with it.

I personally see the TAPR SS radio as being far too little, and far too
late. This would be like releasing a 33.6k modem today.

Definitely a fantastic idea at the time, but the window of opportunity has
come and gone.

I also understand completely how this happened as well. As it's an extremely
difficult task to have the cycles to complete these many design issues,
while working full time today trying to keep our families fed. If none of us
had to worry about working, it would be plenty simple to have the time to
tackle these kind of projects in a timely manner. So I am definitely NOT
trying to take anything away from the design team and their endless efforts,
as I feel they never get near the credit and appreciation they so well
deserve.

My 2 cents worth,
Walter/K5WH

-----Original Message-----
From: bounce-ss-5037@lists.tapr.org [mailto:bounce-ss-5037@lists.tapr.org]
On Behalf Of Johan
Sent: Thursday, January 06, 2000 3:17 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Is the the FHSS radio obsolete by now?

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>   and John S for final review before the next board run/fab takes
>   place. John S requested further information from Steve L regarding
>   the state of the RF boards that will be delivered for testing, so
>   that he and David could begin to develop necessary test equipment
>   interfaces.
>
> Summary
>
>   Overall the project proceeds well. We had hoped to have the
>   current version of the RF Board in alpha testing before January
>   1st, but with the additional changes in parts on the board (to help
>   with fabrication later in the process) the RF board alpha slipped
>   into first quarter 2000. Once the final review of the new layout
>   is complete, the process of board production and then fabrication
>   to get us to testing should be quick. When the RF board goes into
>   fabrication the digital board will be starting into the layout
>   process at the production house. This will allow the digital board
>   to come out about the time we have the RF board testing completed.
>   This is the plan for now.
>
>   --
>
> Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ
> 85749-9399. Phone: (940) 383-0000. Fax: (940) 566-2544.
> Internet: TAPR@TAPR.ORG
>   --
> Greg Jones, WD5IVD, wd5ivd@tapr.org
>
> ---
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>

You are currently subscribed to ss as: K5WH@HOUSTON-INTRANET.COM
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---
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8. [ss] RE: Is the the FHSS radio obsolete by now?

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Thu, 06 Jan 2000 09:47:18 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58622-2000.01.06-10.03.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Walter Holmes wrote:
>
> I agree completely......
>
>   3 years ago when this was a hot idea, it made a LOT of sense. And ALL of
> us were very excited to hear about the project. But given today's rapid
> advances in technology, and sharp decline in prices for the same, perhaps
> there would be a far better advantage to pick one of these off the shelf
> technologies, standardize on them for compatibility reasons, and go forward
> with it.
>
> I personally see the TAPR SS radio as being far too little, and far too
> late. This would be like releasing a 33.6k modem today.

And I must disagree: The design effort for this radio will allow future designs to proceed with more deliberate speed. As Walter notes, the requirement for devoting significant time to the design process must be weighed against the need to stay gainfully employed and productive. However, if we don't develop the necessary skills and background in the basic design, all the paper design in the world will not result in a later iteration that serves our needs.

I'd have loved to see this project spring fully formed out of a meeting at Tuscon 3 years ago, shortly after the initial announcement. I've been as frustrated as anyone at the delays of a project I think is a real asset to the Amateur Radio art (anyone seen a FHSS radio from Kenwood lately?). I know what the design and implementation time can be like. I recall one specific project I worked on, 40 hours a week, AFTER work, for 3 years before we implemented. Lots of naysayers. Lots of folks wonedering if we'd ever get it going. But when SAREX-II flew, we had a solid design and hardware implementation.

Keep up the development. If it's superceded initially by commercial interests in the ISM band, fine. The next one isn't as likely to be superceded, because the industrial folks are looking for a plateau to achieve that will satisfy N% of their customers and they'll rest and perform minor refinements... not further innovation.

73, gerry n5jxs
--
Gerry Creager   Mapping Sciences Laboratory
409.845.7201 Office   Texas Agricultural Experiment Station
409.845.2273 Fax   Texas A&M University System
409.228.7686 Pager (preferred) College Station, Texas 77843-2120
gerry@page4.tamu.edu   Pager: 4092287686@mobile.att.net
"Opinions expressed are mine and do not necessarily represent those of Texas A&M University."

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] RE: TAPR conflict of interest? (Was Re: FHSS Radio Update)

From: "Mitchell, Ed" <ed.mitchell@boeing.com>
Date: Thu, 6 Jan 2000 07:47:57 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58625-2000.01.06-10.04.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I agree, this smacks of a "secret deal" and so should be fully explained, does the SS community realize and benefit from this or is this R&D donated with no return.

> -----Original Message-----
> From: Jeff King [SMTP:jeff@aerodata.net]
> Sent: Thursday, January 06, 2000 12:15 AM
> To: TAPR Spread Spectrum Special Interest Group

> Subject: [ss] TAPR conflict of interest? (Was Re: FHSS Radio Update)
>
>
>
> C Byers wrote:
>
> > Great work !
>
> There is no doubt about that.
>
> However, I had hoped to see more detail about the Dandin Group SS radio
> licensing deal in the last PSR and/or with this posting. Still nothing
> even
> though I know a few others besides myself have questioned the Dandin
> Group deal.
>
> Will the Dandin deal limit third party licensing of the SS radio? It was
> my
> impression that the SS radio would be licensed in much the same manner
> as the TAPR TNC2. Is this still the case or is this an exclusive deal only
> with Dandin? I for one had hoped to have the opportunity to be able
> to license the TAPR SS radio for my company. And in TAPR's
> most recent membership poll (Winter 1996 PSR), the membership
> overwhelmingly disapproved of exclusive licensing deals....they limit
> competition and lead to higher prices for all . Has the BOD gone against
> the wishes of the membership in approving this deal? (assuming it is an
> exclusive license)
>
> What are the qualifications of the Dandin group? This takes an even
> greater importance if TAPR has exclusively licensed the SS radio to the
> Dandin group. Do they have the funds to develop this? A sensible
> marketing and production plan? We all know about the TNC2 deal...
> some TNC2 licenses did good (MFJ, Paccomm), will others (GLB,
> DRSI, AEA) failed. But that was the beauty of the non-exclusive
> TNC2 license....not only was TAPR not tied to one manufacturer,
> it also increased competition and made the TNC affordable. How
> will the Dandin deal do this with the SS radio if it is exclusive? (which
> I don't know if it is)
>
> And then the matter of officers/appointees of TAPR also simultaneously
> being
> part of the Dandin group should be fully explained/disclosed to the
> membership
> See: http://www.dandin.com/group.html Yes, I know some BOD members
> wrote me privately saying "it was a good deal" and to trust them but
> the fact this has not been publicly disclosed to the membership
> is disturbing. And I am told the May 1999 BOD meeting minutes have
> yet to be reduced to writing/made available. This meeting is where I am
> told the potential of a conflict of interest with the Dandin Group/TAPR
> was discussed.
>
> I've found in life its better to fully address/disclose things
> that can be misunderstood.. I think TAPR would be a better
> organization if they would address this to the membership instead of
> hoping
> (apparently) that most don't notice and/or the pest members will
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> go away.
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> Just my thoughts. I'm sorry if this offended anyone on the list, being
> it was non-techical (but did relate to the SS radio). I think we as
> members need to monitor our organization. Hopefully, TAPR will release
> more details on the Dandin Deal so that members that don't believe
> in "faith" but in facts can feel secure that this deal was in the best
> long term interest of TAPR's membership.
>
>
> -Jeff
>
>
>
> ---
> You are currently subscribed to ss as: ED.MITCHELL@BOEING.COM
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---
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10. [ss] RE: Is the the FHSS radio obsolete by now?

From: Alan Desjardins <adesjard@cme.com>
Date: Thu, 6 Jan 2000 10:05:32 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58635-2000.01.06-10.28.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Folks,

One thought to consider. Developing this might show as an indication to the Amateur manufacturers that we are serious about this mode, and that investigation and investment into a commercial product might have a future.

Just a thought.....

Alan P. DesJardins
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems Archetecture
30 South Wacker Drive
Chicago, IL 60606
(312)338-2853
adesjard@cme.com

-----Original Message-----
From: Gerry Creager N5JXS [SMTP:gerry@cs.tamu.edu]
Sent: Thursday, January 06, 2000 9:52 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] RE: Is the the FHSS radio obsolete by now?

Walter Holmes wrote:
>
> I agree completely......
>
> 3 years ago when this was a hot idea, it made a LOT of sense. And ALL of
> us were very excited to hear about the project. But given today's rapid
> advances in technology, and sharp decline in prices for the same, perhaps
> there would be a far better advantage to pick one of these off the shelf
> technologies, standardize on them for compatibility reasons, and go forward
> with it.
>
> I personally see the TAPR SS radio as being far too little, and far too
> late. This would be like releasing a 33.6k modem today.

And I must disagree: The design effort for this radio will allow future designs to proceed with more deliberate speed. As Walter notes, the requirement for devoting significant time to the design process must be weighed against the need to stay gainfully employed and productive. However, if we don't develop the necessary skills and background in the basic design, all the paper design in the world will not result in a later iteration that serves our needs.

I'd have loved to see this project spring fully formed out of a meeting at Tuscon 3 years ago, shortly after the initial announcement. I've been as frustrated as anyone at the delays of a project I think is a real asset to the Amateur Radio art (anyone seen a FHSS radio from Kenwood lately?). I know what the design and implementation time can be like. I recall one specific project I worked on, 40 hours a week, AFTER work, for 3 years before we implemented. Lots of naysayers. Lots of folks wonedering if we'd ever get it going. But when SAREX-II flew, we had a solid design and hardware implementation.

Keep up the development. If it's superceded initially by commercial interests in the ISM band, fine. The next one isn't as likely to be superceded, because the industrial folks are looking for a plateau to achieve that will satisfy N% of their customers and they'll rest and perform minor refinements... not further innovation.

73, gerry n5jxs
--
Gerry Creager Mapping Sciences Laboratory
409.845.7201 Office Texas Agricultural Experiment Station
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409.228.7686 Pager (preferred)   College Station, Texas 77843-2120
gerry@page4.tamu.edu   Pager: 4092287686@mobile.att.net
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11. [ss] Re: New to TAPR and SS Sig

From: Gregory Beat <gregory.beat@mediaone.net>
Date: Thu, 06 Jan 2000 10:22:06 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58637-2000.01.06-10.36.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Alan -

Small world !

We should have coffee sometime and discuss since I am currently working as a
consultant for the Chicago Board of Trade !

Gregory Beat, w9gb
Senior Manager, Ernst & Young LLP
gregory.beat@ey.com

Alan Desjardins wrote:

> Hi There,
>
>   I'm new to the group, my call is N5VXL, and I work with the commercial
> Part 15 SS radios in my work at the Chicago Mercantile Exchange. I have a
> lot of interest in development of SS for Ham use, and if I can contribute
> in any way to the success of the project I offer my assistance.
>
> Alan
> N5VXL
>
> Alan P. DesJardins
> RF Network Engineer
> Chicago Mercantile Exchange
> MIS Systems Archetecture
> 30 South Wacker Drive
> Chicago, IL 60606
> (312)338-2853
> adesjard@cme.com
>
> -----Original Message-----
> From: Jeff King [SMTP:jeff@aerodata.net]
> Sent: Thursday, January 06, 2000 2:15 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] TAPR conflict of interest? (Was Re: FHSS Radio Update)
>
> C Byers wrote:
>
> > Great work !
>
> There is no doubt about that.
>
> However, I had hoped to see more detail about the Dandin Group SS radio
> licensing deal in the last PSR and/or with this posting. Still nothing
> even
> though I know a few others besides myself have questioned the Dandin
> Group deal.
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> Will the Dandin deal limit third party licensing of the SS radio? It was my
> impression that the SS radio would be licensed in much the same manner
> as the TAPR TNC2. Is this still the case or is this an exclusive deal only
> with Dandin? I for one had hoped to have the opportunity to be able
> to license the TAPR SS radio for my company. And in TAPR's
> most recent membership poll (Winter 1996 PSR), the membership
> overwhelmingly disapproved of exclusive licensing deals....they limit

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> the wishes of the membership in approving this deal? (assuming it is an
> exclusive license)
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> marketing and production plan? We all know about the TNC2 deal...
> some TNC2 licenses did good (MFJ, Paccomm), will others (GLB,
> DRSI, AEA) failed. But that was the beauty of the non-exclusive
> TNC2 license....not only was TAPR not tied to one manufacturer,
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> And then the matter of officers/appointees of TAPR also simultaneously
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> part of the Dandin group should be fully explained/disclosed to the
> membership
> See: http://www.dandin.com/group.html Yes, I know some BOD members
> wrote me privately saying "it was a good deal" and to trust them but
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> is disturbing. And I am told the May 1999 BOD meeting minutes have
> yet to be reduced to writing/made available. This meeting is where I am
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>
> I've found in life its better to fully address/disclose things
> that can be misunderstood.. I think TAPR would be a better
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> go away.
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> Just my thoughts. I'm sorry if this offended anyone on the list, being
> it was non-techical (but did relate to the SS radio). I think we as
> members need to monitor our organization. Hopefully, TAPR will release
> more details on the Dandin Deal so that members that don't believe
> in "faith" but in facts can feel secure that this deal was in the best
> long term interest of TAPR's membership.
>
> -Jeff
>
> ---
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> You are currently subscribed to ss as: GREGORY.BEAT@MEDIAONE.NET
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12. [ss] Re: Is the the FHSS radio obsolete by now?

From: Dale Heatherington <wa4dsy@wa4dsy.radio.org>
Date: Thu, 6 Jan 2000 13:00:08 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58664-2000.01.06-12.43.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 06 Jan 2000, you wrote:
[deleted]
>
> once you have the radios, then have the whole issue of engineering
> paths. It's not like VHF repeaters where you find a high point, pump
> out a bunch of power and you can blanket the huge area with coverage.
> I was fortunate enough to be able to gain access to a path analysis
> program recently and I tried to figure out if there were any paths
> between myself and a half a dozen nearby hams. Nearly everyone had
> some form of obstacle between themselves and most of the group. This
> tells me that if we were able to find a common high point, we would
> still have serious problems with hidden transmitter issues unless we
> were operating in classic repeater mode and able to use the repeaters
> output as a way of managing collisions.

FYI: I have been running a wa4dsy-Paccom 56K RF modem as a full duplex bit
bit regenerator on 445.15 output and 440.15 input. This is a standard 5 Mhz

split and conventional off the shelf cavity duplexers are used along with a
single antenna. Since bit regeneration mode is built into the modem the only
other thing needed was to split the transverter functions. The TX IF drives a
transmitting converter and a seperate receving converter drives the RX IF input.
There are no desense problems. This has been running for over 3 years with only
one failure instance caused by a defective low level ampilfier chip in the
Downeast Microwave transmitting converter.

This 56K repeater is on a high point such that I get error free results from 28
miles (Well , I do have a 190 foot tower). The user station which supplies
internet connectivity is about 7 miles away from the repeater in a low spot. He
has 2 stacked 6 element yagis up only about 20 feet. Power levels involved are
about 7 watts. Note this is "conventional repeater" mode with no hidden
station problems.

However, interest in this resource is low to non-existant. Very few hams
seem motivated to do high speed RF networking. (high speed relative to 1200
baud that is) Perhaps if the hardware cost $100 and was plug and play on
USB and used a built in rubber duck antenna interest would increase :-)

 --
Dale Heatherington
daheath@attglobal.net
Web Page http://www.wa4dsy.radio.org
Sent by KMail for Linux

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: Is the the FHSS radio obsolete by now?

From: Alan Desjardins <adesjard@cme.com>
Date: Thu, 6 Jan 2000 12:34:04 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58666-2000.01.06-12.56.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think Dale Nialed it! It needs to be available and cheap(er). Where's Moore when we need him?

Alan DesJardins (N5VXL)
RF Network Engineer
MIS Systems Architecture
Chicago Mercantile Exchange
30 South Wacker Drive
Chicago, Illinois 60060
(312)338-2853
adesjard@cme.com

-----Original Message-----
From: Dale Heatherington [SMTP:wa4dsy@wa4dsy.radio.org]
Sent: Thursday, January 06, 2000 12:32 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Is the the FHSS radio obsolete by now?

On Thu, 06 Jan 2000, you wrote:
[deleted]
>
> once you have the radios, then have the whole issue of engineering
> paths. It's not like VHF repeaters where you find a high point, pump
> out a bunch of power and you can blanket the huge area with coverage.
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However, interest in this resource is low to non-existant. Very few hams seem motivated to do high speed RF networking. (high speed relative to 1200 baud that is) Perhaps if the hardware cost $100 and was plug and play on USB and used a built in rubber duck antenna interest would increase :-)

--
Dale Heatherington
daheath@attglobal.net
Web Page http://www.wa4dsy.radio.org
Sent by KMail for Linux

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---
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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Re: Is the the FHSS radio obsolete by now?

From: Phil Karn <karn@qualcomm.com>
Date: Thu, 6 Jan 2000 11:48:13 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "karn@qualcomm.com"
 <LYR4948-58664-2000.01.06-12.43.27--KARN#QUALCOMM.COM@lists.tapr.org>
 (message from Dale Heatherington on Thu, 6 Jan 2000 13:00:08 -0500)
Message-ID: <LYR6751-58681-2000.01.06-14.04.10--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>However, interest in this resource is low to non-existant. Very few hams
>seem motivated to do high speed RF networking. (high speed relative to 1200

Well, now that dialup modems are running at nearly 56kb/s, cable modems and DSL are growing rapidly, and none have any of the onerous content restrictions associated with ham radio, is that really a surprise?

I know my own interest in on-air networking dropped rapidly when I got ISDN in 1995, and again when I got Road Runner and Rhythms DSL in the years after that. Virtually *all* of the traffic I send over these services would be in violation of Part 97. Only some of it is business traffic, but a very large fraction of it is encrypted (with SSH). Even my websurfing, which I encrypt as a matter of principle.

Phil

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] Re: Is the the FHSS radio obsolete by now?

From: Jeff King <jeff@aerodata.net>
Date: Thu, 06 Jan 2000 16:44:19 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58699-2000.01.06-15.59.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lots of comments on the messages, so I'll just put them all in one.

"Eric S. Johansson" wrote:

> One of
> the reasons for doing our own spread spectrum care is so that we have
> a reason to keep access to the boat loads spectrum were not exactly
> using at 900 MHz and up. If we can get by with using the ISM bands,
> then there is no reason for us to keep exclusive ham bands
> allocations.

Of course you do know that the TAPR SS radio is in this same ISM
band, don't you? (900mhz) This has the advantage (or disadvantage)
of allowing dual marketing to both Part 97 and Part 15 on the
same platform. A guess on my part, but likely I am correct.

Walter Holmes wrote:

> But given today's rapid
> advances in technology, and sharp decline in prices for the same, perhaps
> there would be a far better advantage to pick one of these off the shelf
> technologies, standardize on them for compatibility reasons, and go forward
> with it.

I'm not saying I agree with your total premise, but what you say makes sense.
In fact, a few outside of TAPR did just this.... Bob Buaas had a group buy
of Wavelan cards. Also, TAPR did make a limited buy of defunct Teatherless
Access units.... but these were not "off the shelf" products. One off the shelf
product that I think might deserve some attention is the Proxim Symphony.
Its cheap and drivers for both Windows and Linux are available.

Gerry Creager N5JXS wrote:

> Walter Holmes wrote:
> >
> > I personally see the TAPR SS radio as being far too little, and far too
> > late. This would be like releasing a 33.6k modem today.
> >
> And I must disagree: The design effort for this radio will allow future
> designs to proceed with more deliberate speed.

Clearly they will have to as during the design cycle of the TAPR SS
radio parts already have become obsolete. I'm *not* trying to be a
naysayer here, but stating a fact that does need to be considered in
any other TAPR projects of this magnitude.

>
> been as frustrated as anyone at the delays of a project I think is a
> real asset to the Amateur Radio art (anyone seen a FHSS radio from
> Kenwood lately?).

And I don't think you ever will. The amateur radio market alone
 never could support a spread spectrum radio.

> Keep up the development.

And I'm not saying not to.... I'd just like to see a little bit more realistic
thinking here. I think Walter's point is a good one..... three+
years ago we were going to have a group buy of FreeWave spread
spectrum radios.....this never happened and any future group buys
(through TAPR) seem to be suspended in favor of this ongoing SS
radio design. Not a bad thing, but I'd like to see TAPR get behind
deploying commercial SS gear in the amateur field. With the new
rules, this is a no brainer.

Dale Heatherington wrote:

> Perhaps if the hardware cost $100 and was plug and play on
> USB and used a built in rubber duck antenna interest would increase :-)

But it almost is! The Proxim symphony cards are approaching that $100 mark
(I think they are around $130 now) and they have a rubber duck! I've seen
a few on the SS sig that are using these in 2-4 mile links with stock power levels.
And even one of the more robust SS radios.... the FreeWave, can be had for
$700 by anyone, and a group buy could lower this price further. And the
FreeWave *can* achieve a 20 mile los link easily at a 173kbaud.

But I think your point(?) is well taken.... there is no market for SS gear to "hams".
(but note I did not say amateur radio).

Phil Karn wrote:

> >However, interest in this resource is low to non-existant. Very few hams
> >seem motivated to do high speed RF networking. (high speed relative to 1200
>
> Well, now that dialup modems are running at nearly 56kb/s, cable
> modems and DSL are growing rapidly, and none have any of the onerous
> content restrictions associated with ham radio, is that really a
> surprise?

Point well taken.... but what about areas were this infrastructure does not exist, such as outside the U.S.? See http://www.dandin.com/news.html (at bottom) and http://www.dandin.com/projects.html for some potential innovative uses of TAPR's SS radio.

But I fully agree with you.... that in the U.S., for the most part, there simply is not a market for such a device for the common "ham" appliance operator. Sure, some of the radio experimenters on here here would buy it.... but in no way could TAPR ever hope to recover its R&D costs on such a limited market.

Iregardless of any pros/cons raised on the TAPR SS project, I'd like to see TAPR get behind a group purchase (be it a facilitator or recommended) of commercial SS wireless LAN projects. This project would have a almost immediate short term pay back and cost's to TAPR would be very little.

-Jeff

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16. [ss] Re: Is the the FHSS radio obsolete by now?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Thu, 6 Jan 2000 18:53:59 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58730-2000.01.06-18.10.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 6 Jan 2000, Dale Heatherington wrote:

> FYI: I have been running a wa4dsy-Paccom 56K RF modem as a full
> duplex bit bit regenerator on 445.15 output and 440.15 input. This
> is a standard 5 Mhz split and conventional off the shelf cavity
... snipped ....
> However, interest in this resource is low to
> non-existant. Very few hams seem motivated to do high speed RF
> networking. (high speed relative to 1200 baud that is) Perhaps if
> the hardware cost $100 and was plug and play on USB and used a built
> in rubber duck antenna interest would increase :-)

it's really great to hear about your experiences with medium speed networking tools. I am not surprised to hear about the low to nonexistent interest. For $100 initial outlay and 20 bucks per month, I can get 56 K. (or close enough) connectivity. To go the route you've gone, I would need to layout closer to $1000 (RF modem, transverter, antenna, feed line). Then, I'd have almost no one to talk to (i.e. fax machine effect).

If hams are going to do anything vaguely useful with high-speed data services over RF, you need to have a sufficiently compelling application to get people to join up and the RF hardware need to be sufficiently inexpensive to be worth taking a risk on. The classic example of this is FM repeaters. Early repeaters were made out of surplus gear and amateur's radios came from the same junk bin. Only once there was enough hams using surplus gear to chat back and forth, did it seem worthwhile to produce commercial radios and repeaters. The early commercial gear sparked enough interest in the folks that didn't have home brewing skills or time to drag them into VHF FM. This in turn sparked even more commercial development and lower-cost radios with more features which attracted even more hams to the point where VHF FM is considered standard operating gear for any amateur.

So, what sufficiently compelling application would justify putting in place a network of digital repeaters at 900 MHz and up?

--- eric

Eric S. Johansson esj@inguide.com esj@harvee.billerica.ma.us
This message was composed almost entirely using NaturallySpeaking

---
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17. [ss] Re: Is the the FHSS radio obsolete by now?

From: Ken Koster <koster@seattle.css.mot.com>
Date: Thu, 6 Jan 2000 15:43:53 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58733-2000.01.06-18.30.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

And for my $0.02 worth.

On Thu, 06 Jan 2000, Jeff King wrote:
> Of course you do know that the TAPR SS radio is in this same ISM
> band, don't you? (900mhz) This has the advantage (or disadvantage)
> of allowing dual marketing to both Part 97 and Part 15 on the
> same platform. A guess on my part, but likely I am correct.

While this may be great for marketing, our local experience is that this
may likely be more of a disadvantage for ham use.

Interference from Part 15 devices and other occupants of 900Mhz can
render commercial SS gear useless. We have a 70 mile overwater 56k
link on 440Mhz followed by a 5 mile downhill link using commercial SS.
The 56k link (local design by VE7BPE) works flawlessly, the last five
miles is now dropping 80% because of increased interference over the
last few years. Other links have similar problems.

I can think of lots of places I'll attempt to make use of the TAPR modem
all of which are going to be away from major metropolitan areas. However,
I'm afraid the TAPR SS radio will find limited use until we can redo the RF
to some other band than 900Mhz.

Don't get me wrong, I'm as anxious to get my hands on the TAPR system
as anyone (got to be the first on My block) but no sooner will I have it than
I'll be trying to figure out how to move it to 1200Mhz or higher.

Ken, N7IPB

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18. [ss] Re: Is the the FHSS radio obsolete by now?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Thu, 6 Jan 2000 19:42:52 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58741-2000.01.06-18.59.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 6 Jan 2000, Phil Karn wrote:
> I know my own interest in on-air networking dropped rapidly when I got
> ISDN in 1995, and again when I got Road Runner and Rhythms DSL in the
> years after that. Virtually *all* of the traffic I send over these
> services would be in violation of Part 97. Only some of it is business
> traffic, but a very large fraction of it is encrypted (with SSH). Even
> my websurfing, which I encrypt as a matter of principle.

you present an interesting predicament.

I think your experience will be a common one as high-speed data access
from commercial carriers becomes more widely available. in an earlier
message, I asked the question about what would be a sufficiently
compelling application to justify putting up a widespread digital
network (yes, I know that's not the exact wording but it's close
enough)

One of my personal opinions is that community access Internet services
would be one of those sufficiently compelling applications. This
would however require a significant change to part 97. It would
require eliminating any rules holding the amateur responsible for
traffic traversing his machine. We would also need to change the
rules to eliminate content restrictions while keeping in place rules
against commercial ownership of amateur radio infrastructure. A

massive gray area occurs when dealing with originating or receiving
commercial content such as email for your SOHO business. The balance
between commercial and noncommercial use is a challenge requiring the
wisdom of Solomon. It is not unlike the challenge faced by the early
days the Internet until the restrictions on commercial traffic was
lifted.

may be community access Internet is better served by part 15 wireless
which again reduces the demand for amateur services and reduces the
justification for amateur spectrum.

Part of the reason I feel community Internet access by wireless is
important is that the telcos (ilecs and clecs) are making an absolute
mess of the last mile infrastructure. Right now to get DSL, you need
to coordinate your ISP, the DSL CLEC, and the local RBOC. In Bell
Atlantic territory (or as I prefer, Bell Titanic) it will take
approximately 2-3 truck rolls to get the service working. At $400 per
truck roll, each house gets awfully expensive.

Other ways they are making a absolute mess of last mile is incredibly
redundant infrastructure at the central office (every CLEC either
installs or purchases access to a DSLAM) and in some territories, they
are laying new copper independent of the RBOC's copper. Some day I'll
rant at you about how last mile infrastructure is a natural monopoly.

anyway, it would be interesting to see if hams could develop a last
mile infrastructure that wouldn't cost $1000 per home to roll-out and
far less than the $1.5 mil per cell site costs.

As for dealing with encrypted traffic, there's no easy answer there
either. I too encrypt virtually all of my traffic although most of it
is work-related. again, there hams could pioneer at the legislative
level on the "if its private, encrypt it" philosophy to radio privacy.

--- eric

PS so sue me, I'm an optimist

Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
This message was composed almost entirely using NaturallySpeaking

---
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19. [ss] Re: Is the the FHSS radio obsolete by now?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Thu, 6 Jan 2000 19:45:53 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58745-2000.01.06-19.02.01--lyris.ss#tapr.org@lists.tapr.org>
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On Thu, 6 Jan 2000, Jeff King wrote:

> Of course you do know that the TAPR SS radio is in this same ISM
> band, don't you? (900mhz) This has the advantage (or disadvantage)
> of allowing dual marketing to both Part 97 and Part 15 on the
> same platform. A guess on my part, but likely I am correct.

urk.. brain fade... you are quite right. I think one of the other
design goals for the TAPR design was to make the radio section
interchangeable for different bands. although, that might be brain
fade as well..

--- eric

Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
This message was composed almost entirely using NaturallySpeaking

---
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20. [ss] Re: Is the the FHSS radio obsolete by now?

From: Jeff King <jeff@aerodata.net>
Date: Thu, 06 Jan 2000 19:54:51 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58749-2000.01.06-19.10.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ken Koster wrote:

> Interference from Part 15 devices and other occupants of 900Mhz can
> render commercial SS gear useless. We have a 70 mile overwater 56k
> link on 440Mhz followed by a 5 mile downhill link using commercial SS.
> The 56k link (local design by VE7BPE) works flawlessly, the last five
> miles is now dropping 80% because of increased interference over the
> last few years.   Other links have similar problems.

I've had growing problems with the WaveLan stuff I have done on
900mhz in the past.... so much so I don't use 900 for DSSS anymore.
It, like most part 15 stuff, just barely complies with the rules for
process gain.... and being it is DSSS, just about any inband carrier
can take it out.

I have had some luck with passband filters, but they are not cheap.

What are the specs on each link, so we can compare apples to apples?
What frequency is your SS link on, spreading method, antenna gain
and power levels? (and also what maker)

On 900mhz, I've had really good luck with the directive systems
loop yagi's (Down East Microwave sells them also). More so then
corner reflectors from 'Olde Antenna labs....even for rejecting
interference.

Also, you might try horizontal polarization for your 900mhz stuff...
seems most of the inband/nearband pagers are vertical.

-Jeff

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21. [ss] Re: TAPR conflict of interest?

From: Steve Stroh <steve@strohpub.com>
Date: Thu, 06 Jan 2000 19:50:39 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58779-2000.01.06-22.06.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My sincere apologies to the technically-oriented SS readership for this
posting. This is very clearly a matter that is internal to TAPR's
operations and not an appropriate topic for discussion on this mailing
list. However, allegations have been made and, distasteful though it is,
allegations have to be responded to or they fester and cause even worse
problems.

I'll answer one of the implied allegations. As TAPR Secretary, it was my
job to record the minutes for the 1998 and 1999 Board of Directors meetings
where the issues of potential conflict of interest and The Dandin Group's
participation in the TAPR Spread Spectrum Radio Project were discussed.

Although I took notes, at these meetings, I was negligently tardy at
converting them into polished, formal minutes suitable for review and
publication. The fact that no minutes from these meetings have been
published in the TAPR Packet Status Register newsletter is my fault. This
issue has since been corrected by the TAPR Board of Directors - I was asked
to resign as Secretary and I agreed that was best. My notes have been
furnished in raw form to the TAPR Board of Directors, who will convert them
into minutes to be published as appropriate (in the PSR, the official TAPR
membership publication).

I'll take this opportunity to add several personal observations this issue.

The potential for conflict of interest was recognized and addressed VERY
early and discussed thoroughly. It's my PERSONAL opinion that TAPR's best
interests in the matter were THOROUGHLY represented. I'll leave it to the
TAPR Board of Directors to elaborate if they feel it appropriate.

It's my PERSONAL opinion that, had The Dandin Group not gotten involved in

the TAPR Spread Spectrum Radio project, that there would not BE a TAPR Spread Spectrum Radio Project. It simply became too big a project for a purely volunteer effort. It had a very promising start and was making great progress until a major redesign was required from the obsolescence of several key parts and some key personnel changes.

The design of the TAPR Spread Spectrum Radio was dictated by the unique set of requirements of hams (and in my totally unqualified opinion, it was magnificently designed). It's on 900 MHz because that's where the most affordable components could be obtained at the time, and 900 MHz isn't as "scary" for hams as higher frequencies. The speed and range were tradeoffs with each other. It's a hopper because hoppers handle the extensive impulse noise and other systems in the 900 MHz band better than DS. There will be a way to "gang them up" to make "hub systems". The TCP/IP stack will be open source. In short, the TAPR Spread Spectrum Radio will be a GREAT system for EXPERIMENTING (remember that word in the context of Amateur Radio???) with wireless techniques of the NEXT ten years, not the previous 30 as most of Amateur Radio has been doing.

All the carping, second-guessing, and just negative discussion in general serves NO purpose and can only detract from the intense effort to actually get the Spread Spectrum Radio out of the design stage and actually into production. Don't like how it's designed? DON'T BUY ONE!

Lastly, TAPR isn't some faceless megacorp... TAPR is a thin cover of organizational capability for volunteers that want to make something happen in wireless-related experimentation. Want to do a group buy of X, or Y, or Z? No one is stopping YOU from DOING so. To simply whine that "TAPR should be doing..." is totally meaningless. If those doing the whining aren't willing to step up and actually DO the work that "TAPR should be doing", NOTHING happens- rightfully so.

I'll be happy to follow up on this discussion in private e-mail but not on this mailing list.

Again, SINCERE apologies to the list for having to discuss something so clearly out of scope with the list's charter.

Steve Stroh N8GNJ

--
Steve Stroh steve@strohpub.com Woodinville, Washington USA
Learn, Share, Grow, and Enjoy!

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22. [ss] Re: [OT] Re: TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Fri, 07 Jan 2000 02:33:33 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58829-2000.01.07-01.49.09--lyris.ss#tapr.org@lists.tapr.org>
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NOTE: NON-TECHINCAL POST REGARDING TAPR SS RADIO
FOLLOWS

Hi Steve:

Your covering two distinct issues here, one being the Dandin group licensing deal (which is the thread you responded to) and the other thread regarding if the TAPR SS radio is obsolete.

I will just respond to the issues surrounding the Dandin Group deal.

Steve Stroh wrote:

> This is very clearly a matter that is internal to TAPR's
> operations and not an appropriate topic for discussion on this mailing
> list.

Maybe not, but it does need to be discussed somewhere. Considering I and others have asked these very same questions, in private mail, to other BOD members, with no direct answers, do you have any suggestions? I'm all ears.

As this issue does deal with the TAPR SS radio, I believe it is
a relevant issue of interest to some on this list. So until the
moderator asks that the discussion be terminated, I feel
it is proper for this list.

> However, allegations have been made and, distasteful though it is,
> allegations have to be responded to or they fester and cause even worse
> problems.

Finally, someone that understands that a cover-up, or perception of same
can be worse then the actual supposed bad act. Mr. Nixon & Clinton could
have used your council.

I need to make it clear I have been asking QUESTIONS. Others may have
connected the dots, and voiced specific charges, but I have yet to make any
specific public allegations of any corporate misconduct. Its not even clear
to me upon reading Arizonia corporation law, that even if the worst apperences
are in fact true, that there is any wrongdoing.

I just think its the right thing to do.... that is, inform the membership.

> I'll answer one of the implied allegations. As TAPR Secretary, it was my
> job to record the minutes for the 1998 and 1999 Board of Directors meetings
> where the issues of potential conflict of interest and The Dandin Group's
> participation in the TAPR Spread Spectrum Radio Project were discussed.
>
> Although I took notes, at these meetings, I was negligently tardy at
> converting them into polished, formal minutes suitable for review and
> publication. The fact that no minutes from these meetings have been
> published in the TAPR Packet Status Register newsletter is my fault.

Allegation? I wasn't making an allegation.... just repeating what you had
told me in a private e-mail message to me on 11/15/99. You hadn't got
to the minutes for May of 1999 yet. So what? The fact of the
matter is, I only asked you for the minutes after I was unable to get
answers to my direct questions from BOD members. The fact that you,
as an unpaid volunteer, who doesn't sit on the BOD, didn't
get them done is really NOT the issue Steve. Your role here, as far
as I can determine, is simply the messenger. If "fault" is to be assessed
here, as you tell us the BOD wants to do, that fault lies strictly on
the BOD's shoulders and not yours.

And just so this doesn't get spun once again off in another direction,
my specific questions, both voiced here and in the past to BOD members
is as follows:

1. Will the Dandin deal limit third party licensing of the SS radio?
2. Is this an exclusive deal only with Dandin?
3. Has the BOD gone against the wishes of the membership in approving this deal?
   (referencing the 1996 membership poll stating the membership was ~90% against exclusive deals)
4. What are the qualifications of the Dandin group?
5. Do they have the funds to develop this?
6. A sensible marketing and production plan?
7. And then of couse I was asking for some explanation to the membership
   of the fact that TAPR BOD member/appointees are listed as being part of the
   Dandin Group (see http://www.dandin.com/group.html)

> This
> issue has since been corrected by the TAPR Board of Directors - I was asked
> to resign as Secretary and I agreed that was best.

Your kidding.... right?   They asked YOU to resign? On what grounds?
Sure... the meeting minutes should have been published, but this specific
issue should have been addressed directly by either the president or
vice president of TAPR in the last PSR. Clearly a case of shooting the
messenger if the Dandin deal is the reason they asked you to resign.

> I'll take this opportunity to add several personal observations this issue.
>
> The potential for conflict of interest was recognized and addressed VERY
> early and discussed thoroughly.

Maybe.... but the real problem is this potential conflict of interest was not disclosed
to the membership. I asked for specific details when I first heard of the Dandin

deal in October of 1999 and was ignored..... I then starting researching the Dandin group on my own, and found that TAPR officers were part of it. This has never been disclosed publically to the membership to this day by any TAPR official (and as you apparently resigned, this still holds true).

> It's my PERSONAL opinion that TAPR's best
> interests in the matter were THOROUGHLY represented. I'll leave it to the
> TAPR Board of Directors to elaborate if they feel it appropriate.

OK. You were there. I wasn't. Once in a while some facts need to go along with the faith that TAPR asks its membership to hold.... this may be one of those times.

Since clearly the perception of a conflict of interest was understood by the BOD (as you stated), I just think its common sense that it be addressed and disclosed in full to the membership. If not for anything other then to simply to head off discussions such as we are having now.

I can't believe the BOD didn't
figure someone would eventually make the direct connection between the Dandin Group and TAPR leadership. You *don't* not say anything and hope mommy and daddy won't find the broken vase behind the coach. You proactively approach the membership and tell them the facts. This whole concellement thing is very childish, and insulting to the membership.

You understood that this apparent conflict of interest, given the facts, was in the best interest of the project. Why can't we, as the membership, be told the same (or a subset of) these same facts and make our own minds up? I truly think the BOD is severely underestimating the understanding of the membership.

> It's my PERSONAL opinion that, had The Dandin Group not gotten involved in
> the TAPR Spread Spectrum Radio project, that there would not BE a TAPR
> Spread Spectrum Radio Project.

Hold on..... lets not start to spin this. I fully believe you in that the SS radio's future may have been in trouble and this deal may have been a good thing. The issue is the continuing non-disclosure to the membership.

[rest deleted as not relevent to conflict of interest thread]

> I'll be happy to follow up on this discussion in private e-mail but not on
> this mailing list.

No, I'm sorry. I already tried that route and got no-where. The membership needs to know what is going on within TAPR. As I said, I'm all ears if you want to move this to another public forum. Maybe rec.radio.digital? In the meantime, I have attached a "[OT]" to the head of this posting.

Thank you

-Jeff

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23. [ss] Re: TAPR conflict of interest?

From: Paul Sadowski <sadowski@bellsouth.net>
Date: Fri, 07 Jan 2000 22:07:00 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-58991-2000.01.07-21.28.50--lyris.ss#tapr.org@lists.tapr.org>
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As a member, I certainly am VERY interested in hearing from BoD's on this appearance of conflict of interest.... had there earlier been a rapid response from someone - and this has been a public issue for months now.. I would have thought nothing of it all... but the silence is a poor reflection on the board.... how about a clear and full explaination so that we can move forward BoD members? Amazing that we can get immediate audio on the TAPR web site of many events TAPR sponsors... but 8 month silence on what happened at that BoD meeting.... a significant turn of events for what I believe has been a costly project for TAPR to sponsor...

I will not second guess what the reason is for silence - or "carp" or "negative

discuss" ... but I certainly will ask for information and do believe a public release is needed so we can clear the air....

> All the carping, second-guessing, and just negative discussion in general
> serves NO purpose and can only detract from the intense effort to actually
> get the Spread Spectrum Radio out of the design stage and actually into
> production. Don't like how it's designed? DON'T BUY ONE!

I for one believe lots of hard work has gone into the project... I'm not going to put down the design.. and nobody's holding a gun to my head to buy one - but that's not the issue... the BoD not telling the membership about the agreement till after the fact... and no explaination of the financial ramifications to the membership at all - not to mention the contractual aspects... that's the issue... just a thought... is the Contract available (it must
have been signed by authorized TAPR person(s) for TAPR).... what's the possibility of getting a copy of it posted on the Web site???... that would resolve
alot of questions / concerns .....

TNX for the BW...
Apologies to anyone offended... that's NOT my intent.. just info at this point...
ALOHA
AH6LS

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24. [ss] Re: Is the the FHSS radio obsolete by now?

From: Daven6ojj@aol.com
Date: Sat, 8 Jan 2000 01:30:26 EST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59024-2000.01.08-00.46.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Let's not forget the part of the FHSS project status report that said there was a desire to keep the cost reasonable. It seems the project team is attempting a group random-juggle of different-sized chainsaws; day-job, home life, steady progress of the design, component end of life issues. Delays are inevitable. Yes, I noticed some commonality between the TAPR BOD and the Dandin Group. But, hey, this project calls for design skills I don't have, and they seem to.

Consider this - part of keeping the cost reasonable is putting the radio on the lowest practical band. Repeatability of the hardware is extremely important to the project's success. Yield failures because of circuit board or component variability will drive the unit cost through the roof. 900MHz is a decent compromise.

Once the project is released, those who are interested can "gin-up" their own RF deck for their band of interest and swap it for the 900MHz band. Let your technically trained imaginations develop a no-tune transverter that uses either the FHSS radio's "IF". (;-)) Or, separate the RF paths just in from the FHSS radio antenna connection and use 900MHz as the transverter IF. Perhaps we have a microwave specialist on the sig that could come up with a variation on Zack Lau's no-tune transverters using a 900MHz IF instead of 144MHz.

If 900MHz is not a reality in some areas (certainly it's marginal in my neighborhood) the transverter design could proceed in parallel with the FHSS radio. The microwave experimenter groups in various parts of the country could be valuable allies in this effort.

My imagination is having fun with the possibilities. I am not trained in microwave design, but I am able to build from a drawing and a box of parts (kit), or modify an existing design to accomplish a given result.

cheers,
Dave McBrayer N6OJJ
daven6ojj@aol.com

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25. [ss] Re: [OT] TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Sat, 08 Jan 2000 02:14:24 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59026-2000.01.08-01.30.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dave:

You pointed out some real common sense things, I'm sure most
of your suppositions are in fact true. However, once again I'm seeing
a spin develop between the technical side and the issue of basic
respect for the membership by the TAPR BOD. These are two seperate
and distinct issues. Excellence in one is not an excuse for the neglect of
another.

Daven6ojj@aol.com wrote:

> Yes, I noticed some commonality between the TAPR BOD and
> the Dandin Group.

And tell me exactly how you noticed this "commonality" between the
BOD and the Dandin Group? You most certainly did not notice it
by any explanation in PSR or from the BOD. You noticed it
because a concerned member brought it to the groups attention.

I'd prefer to hear it directly from the BOD rather then guess as to
the reasons. Wouldn't you?

73

-Jeff

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26. [ss] Re: [OT] TAPR conflict of interest?

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 8 Jan 2000 15:30:50 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59140-2000.01.08-15.47.59--lyris.ss#tapr.org@lists.tapr.org>
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Because the scope of this issue can not adequately be covered in this
message, my full response on these issues will appear in the next PSR. I
almost had most of this written for last quarter, but ran out of time and
submitted what you read last issue. In the meantime, I want to answer at
least some of the questions raised. I also want to say that with hindsight
we should have addressed some of these issues earlier. Although I firmly
believe that TAPR is doing -- and has done -- the right thing with respect
to this project, we should have been more forthcoming. As noted near the
bottom of this message, the Board recognizes that we need to improve
communications on organizational matters, and we're taking actions to
address that.

1. Contract Availability
As to making contracts available - TAPR has never made available contracts
regarding OEM deals. This dates back as far as the founding of the
organization and is a requirement of doing business with commercial
entities who are concerned about the confidentiality of their business
plans. We don't normally disclose even who has signed agreements, but both
TAPR and Dandin felt it was important to show the connection between the
two groups.

Someone asked about license and commercial availability of the radios.
Until the actual technology transfer is complete, TAPR is not at liberty to
discuss further the license agreement. When that time comes, I am sure
Dandin and TAPR will formally announce how the radio will be made available
both to the amateur radio community and commercially.

2. Conflict of Interest
I am sorry that some of you think that I or the board don't have the best
interest of the organization at heart. You (the membership - those on this
list at least) elect the board of directors to run the organization and the
board elects the officers that carry out the day to day operations.
Personally, I have been a member of TAPR since 1985, an officer since 1988,

and served as the organizations 5th President since 1993. TAPR makes deals every year with someone, even active officers and board members on occasion. In those cases, the board discusses the potential for a conflict of interest and measures are taken to avoid those possibilities. In this case, the Board recognized the conflict, discussed it at the May meeting, and voted to (a) pursue the deal and (b) have John Ackermann handle the contract and agreement. While Steve Stroh explained about the minutes, as President it was truly my fault that those minutes didn't appear in a timely fashion in the PSR. I let that item slip far too long and I should have been on top of that issue. As someone pointed out, Steve is a volunteer like all of us, and therefore I was giving him as much time as I could -- in this case a little too much.

3. History of OEM deals
We attempted several OEM deals with other companies (those that contacted us and those that we contacted) before entering into the final OEM agreement with Dandin. There were several reasons why these agreements failed: 1) TAPR couldn't maintain control of the final design for later use, 2) companies couldn't live with the possibility that TAPR might default on the agreement and not deliver anything for the money paid, 3) the development team had to buy off on who they were dealing with for the technology transfer both personally and because of potential conflicts of interest in their professional lives, 4) TAPR wanted access to any production run based on the design, or 5) the potential companies all wanted to basically pay nothing for the technology transfer because not enough of the design was available for production (i.e. their investment from getting to a completed unit was far greater then they were willing to pay for the license fee TAPR was asking). I think these problems point to some of the reasons why amateur radio groups like TAPR can do small scale productions with success, but face major hurdles for doing large scale projects such as this one.

After several failed attempts to reach agreement with these potential manufacturers, I actually began working up a business plan for TAPR to do the production. When Dewayne Hendricks, WA8DZP, asked me to help found Dandin (http://www.dandin.com) with him, we discussed the radio project. The bottom line was that Dandin is willing to take the risks and pay for the TAPR technology transfer that no other commercial company was either willing or able to do. One of the most important aspects of this deal was that the development team was willing to go along with it and felt that Dandin was in a unique position to make the transition of technology between the two groups much easier with a high level of communications and little or no hassles involved. Without the development team buying into the mechanism for technology transfer, any agreement was doomed to failure. As mentioned above, this was one of the reason two of the potential commercial agreements failed before this one. The bottom line is that with this deal TAPR is reimbursed for the project development cost to date, makes a bit of money now on top of that, and hopefully makes more money from royalties when the radio goes into production. In addition, the radio will be available to the amateur community through TAPR at a price far better than we would be able to obtain if we manufactured the radios ourselves. Dandin gets access to a great radio design and those of us in Dandin who have been involved with TAPR can help gain closure on this project and make something come to life that was about ready to die from the lack of cash. It is a good match.

4. Radio Design
Based on some of the comments I have read on the list, I would suggest that you go back and read and listen to the various papers, talks, and presentations made by the development group. This should clarify any discrepancies between what we are doing and what people have been discussing on this list. It is a FHSS radio, so operating on 900Mhz is much less of a problem. The error-correction technology built into the radio will also make it more robust against interference. 900Mhz is a good band because you get a good tradeoff between distance and speed. Yes, 2.4 or 1200 might be better amateur radio bands, but from the start we knew that we had to be on a band that could be made available to both Part 97 and Part 15 in order to be attractive to possible OEMs. Production size is the key to keeping the price affordable and not making these radios cost $1000 or more each. We have too much energy and time invested in it to only sell a few hundred units and then have it die. Another reason 900 was picked is because 1) the parts can be bought and for the most part are not on allocation and 2) 900mhz is a cheaper band to buy RF parts for. As someone also pointed out, the production issues at 900 are much easier to deal RF wise.

It is an open OS so that amateurs can experiment with it. The development team picked Xinu for that specific reason. The FPGA code for the modem will be made available. The only thing not being made available will be

the PIC chip code that controls the hopping sequences, and this is due to legal restrictions on the export of SS technology. This doesn't mean that you can't program you own PIC chip based on the SPI definitions defined in the source code (should be a simple enough task for those PIC gurus out there). This only means that TAPR or Dandin can't make it available if either group is selling the radio outside the US. I am sure several PIC chips will appear on people's web sites once the radio is available for those that would want to change the sequence for operations under Part 97. The digital and RF board sections are on two different boards, so that someone could design additional RF platforms for the thing. Based on all the RF design I see happening on this list, I will be happily surprised when someone else designs an alternate board for the project that is reproducible. I know I am very interested in developing something on 1.2G and 2.4G myself.

Finally, why this design ? As Lyle Johnson explained to me when I first came into TAPR all those years ago "Those who build or code rule." That simple statement drives most of what TAPR is about. The group or person that shows up and puts the time, energy, and effort decides what the final outcome is. All TAPR can do is provide tools, equipment, software, and a little cash here and there to help. I know of people on this list that have said they were going to do this or that that never delivered on those statements. That is fine, this is a hobby and we all have to recognize that. However, you have to applaud the people who do deliver on both the small and enormous projects such as this radio.

5. Group Purchases
As to group purchases, if someone can get something arranged we would be glad to look at doing it through TAPR. We were very close on the Freewave deal (now several years past). One of the driving forces for Freewave to deal with TAPR was to be the pipeline into the amateur community. After they kept getting calls from amateurs and they realized the potential impact these sales would have upon their Part 15 customers they backed out of the deal. We have tried doing other deals, but the simple fact is that no Part 15 (aka license exempt) company is going to sell in bulk to amateurs radio operators who, because they can use more power and better antennas, are likely to interfere with their primary customer base, or spend time dealing with what they perceive to be a market outside their business plan. That was at least the situation before the recent Report and Order, and I doubt that that it's changed. Also, there isn't any reason to do a buy unless we can get a deep discount to make it worthwhile in doing. The price points on many of the radios are just too steep for the "amateur radio operator" to buy. I don't find it difficult to plop down $1500 here or there for SS equipment, but then again I am not a "normal" person. At $550 each we didn't have that many orders for the TALNET systems. As Steve Stroh pointed out in his excellent posting, if you want to spend the time and you can find a bargain that TAPR can make available to the membership, please let me know when you have something. After five plus years I am eager for someone else to "push that cart" on this issue.

6. Membership Issues and Feedback
A major item to be announced in the next PSR is how to solve issues like this one which cropped up on a technical list. I am sure that several good technical people have by this time unsubscribed to the list, which is a shame. Some of this might have been corrected with the minutes getting published, but I am sure now that additional comments and feedback from the membership would have resulted and is a good thing that our membership wants to provide input. Traditionally in TAPR the board was available at the TAPR annual meeting, now merged with the DCC. With the growth of the organization, the once a year meetings like the DCC and Dayton don't seem to handle membership issues quick enough. We had up to this time just been using the various lists to handle issues as they came up, but the result of those postings have several times been to the technical detriment of the list that was handling it and sometimes turned the list moderator's job into a nightmare. The board has recommended the creation of a membership issues list that all Board members would be on. This would be similar to the in-person meetings we try to do at DCC each year. In this way members can post to the list and get responses from the Board that can later be searched in the archives. In addition, this experience has taught us that we need to do a better job communicating TAPR's activities, while balancing the business confidentiality issues that really do exist. We're taking that message to heart and will do our best to improve our outbound communications.

Cheers - Greg Jones, WD5IVD
President TAPR

P.S. This will be my last posting on the subject on this list.

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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27. [ss] Re: [OT] TAPR conflict of interest?

From: Steve Dimse <sdimse@netrox.net>
Date: Sat, 8 Jan 2000 16:33:55 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59143-2000.01.08-15.51.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 1/8/00 2:14 AM Jeff King (jeff@aerodata.net) wrote:

>And tell me exactly how you noticed this "commonality" between the
>BOD and the Dandin Group? You most certainly did not notice it
>by any explanation in PSR or from the BOD. You noticed it
>because a concerned member brought it to the groups attention.
>
>I'd prefer to hear it directly from the BOD rather then guess as to
>the reasons. Wouldn't you?
>
The commonality was never hidden, nor was any reason seen to publicize it. There are many issues discussed by the board that do not make it to the PSR. The whole point of having a Board of Directors is to delegate authority to a few people who have a better chance of making things happen in a small group setting. When you vote for a Director, you vote for someone to represent you. I believe I have acted in the best interest of TAPR, its members, and ham radio in general by approving this deal.

Until now I have chosen to keep something quiet, but perhaps this will help people see things in a different light. Close to 2 years ago, when there was a danger of the spread spectrum project getting canceled due to lack of funds, I donated $3000 to the project. This was a true donation, I asked for, and got, nothing, including recognition. The existence of my donation was known to only a handful of people, I didn't even ask for assurances that I be part of the beta test. I simply wanted to see these radios developed and offered to the amateur market.

I most certainly did not donate that money to give any commercial interest a boost. Nor would I allow any deal that caused the amateur use of the radio to suffer in any way. In fact, because of my donation, the deal was cleared through me, separate from my involvement as a board member. I could have scuttled the whole thing on my own, as could the hams developing the radio. Not only did I choose not to stop the deal, I was, and am, very excited about it, as it will bring these radios to us far sooner than TAPR could have done on its own.

Like many contracts, both parties feel it is in their best interests that the details remain private. The details of the TAPR-2 licenses are not public knowledge either, even after all these years, so this is not an unusual case. Decisions like these are why the board was empowered in the first place. As Steve Stroh pointed out, the board recognized the potential for conflict of interest from the start, and took great pains to assure that none occurred. No external pressure was applied, everyone voted their conscience, and the vote was unanimous.

I further testify that I was not involved, nor to the best of my knowledge were any other TAPR board members involved, in the assasinations of JFK, RFK, and MLK. The grey skinned, large eyed entity spotted at TAPR board meetings is not an alien but just one of the SS team members that has spent far too much time peering through a 'scope soldering SMT parts. And finally, the persistant rumors that The King gave a private concert following the Board meeting in Phoenix are pure speculation.

Elvis has indeed left the building...

Steve K4HG

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28. [ss] Re: [OT] TAPR conflict of interest?

From: "Roger Rehr" <rrehr@epix.net>
Date: Sat, 8 Jan 2000 17:14:19 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59145-2000.01.08-16.30.35--lyris.ss#tapr.org@lists.tapr.org>
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Hello, All.

I am writing this for only one reason. I am concerned that some of the comments I have seen on this reflector will do what I have seen happen so often in other spheres.

Specifically, these days outstanding people giving freely and probably too generously of their time and expertise for whatever cause or organization are almost routinely criticized and hounded from their public service by self-appointed critics/watchdogs. This often occurs when these policemen, as is common today, impute the worst possible motives to the supposed offenders, often involving a supposed conspiracy of some sort or other. Totally ignored is the fact that these volunteers are putting in tremendous numbers of hours and contributing tremendous expertise for the public good, not for salary, as they are receiving none. In fact, many of them are working long hours and under considerable stress at their day jobs, as well. And yet they have the drive and the public-spiritedness to try to advance the common good! At least one individual has already left our service in this case as the mailing-list criticism has escalated.

In my opinion the real offenders are not the selfless volunteers under fire, but the conspiracy-mongers, who deprive the rest of us of the services of superb individuals by the effects of their unreasonable attacks. The real victims are the selfless public servants (yes, this does include the TAPR Board and TAPR volunteers who serve their community, us, tirelessly and with inspiring diligence, responsibility, and endurance) and in this case us, the TAPR membership and all those who benefit from TAPR's many intellectual and physical contributions to ham radio and digital electronics.

So, if you are a TAPR BOD member or volunteer, please keep doing the excellent job you have been doing and ignore the noise.

If you are one of the conspiracy mongers, please just keep quiet. If you can't do that, consider counselling. You are just ruining it for the rest of us that don't see a snake under every rock.

73 from
Roger Rehr W3SZ ex-AA3QK ex-WA3JYM
mailto:rrehr@epix.net FN20ah
http://www.epix.net/~rrehr
2 Merrymount Road, Reading, PA 19609
610.670.8687

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: [OT] TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Sat, 08 Jan 2000 17:20:14 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59146-2000.01.08-16.37.09--lyris.ss#tapr.org@lists.tapr.org>
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Greg:

Greg Jones wrote:

(lots of stuff)

Thank you for your response.

As you appear to have addressed two threads here, one being
the thread I started "Tapr conflict of interest?" and the other being
"Is the the FHSS radio obsolete by now?", I need to make clear I
never questioned the technical ability/decisions of the TAPR team.

My concern simply was the complete lack of disclosure by the BOD,
which you appear to have largely rectified now.

Also, for the record, it needs to be noted that I and others
wrote and/or called just about every BOD member on this issue
with little or no direct response. So taking the "unsavory" method
of asking these same questions in public was not my first choice.

None-the-less, I wish to again thank you for your posting.

-Jeff

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30. [ss] Re: [OT] TAPR conflict of interest?

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 8 Jan 2000 16:36:47 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59148-2000.01.08-16.56.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Thank you for your response.
>
>Also, for the record, it needs to be noted that I and others
>wrote and/or called just about every BOD member on this issue
>with little or no direct response. So taking the "unsavory" method
>of asking these same questions in public was not my first choice.
>

and I believe that Steve Stroh, Bob Hansen, and John Ackermann all sent you
email regarding that note you sent to the board before this thread was
begun.

Anyways, I hope that the new org list will allow these "unsavory" questions
to be brought up on a channel that doesn't distract from the various
technical lists. If it does and allow members better access to the board
and officers then all this was for the good of the organization.

>None-the-less, I wish to again thank you for your posting.

Glad the posting answered yours and others questions.

Now back to SS technology.

Cheers - Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

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31. [ss] Re: [OT] TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Sat, 08 Jan 2000 18:56:10 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59163-2000.01.08-18.14.10--lyris.ss#tapr.org@lists.tapr.org>
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Roger:

Roger Rehr wrote:

>
> Totally ignored is the fact that these volunteers are putting in tremendous
> numbers of hours and contributing tremendous expertise for the public good,

No-one has _EVER_ questioned this. You are trying to spin things here.

> At least one individual has already left our service in
> this case as the mailing-list criticism has escalated.

Oh, you mean Lyle et. all because of the GPL stuff? And your
trying to equate a well founded, on topic, concern about a TAPR
conflict of interest with this?? A job is waiting for you at the White House.

> If you are one of the conspiracy mongers, please just keep quiet. If you
> can't do that, consider counselling. You are just ruining it for the rest
> of us that don't see a snake under every rock.

So, you suggest Matt Drudge, Ralph Nader et all seek counseling? You
do raise some good points, but you really are confusing things. I stand
by my convictions, that the TAPR BOD should have disclosed to the
membership, which they now have done. This is the ONLY accusation
I have made. The Dandin Deal was big enough, and divergent enough from
previous TAPR policy that it deserved some mention.

Your reading alot more into this then really exists.

So instead of continuing to try and spin things, lets all be friends and go
on with the task at hand, OK?

-Jeff

>
>
> 73 from
> Roger Rehr W3SZ ex-AA3QK ex-WA3JYM
> mailto:rrehr@epix.net   FN20ah
> http://www.epix.net/~rrehr
> 2 Merrymount Road, Reading, PA 19609
> 610.670.8687
>
> ---
> You are currently subscribed to ss as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
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32. [ss] Re: [OT] TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Sat, 08 Jan 2000 18:55:55 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59162-2000.01.08-18.13.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As Greg has already addressed this, I'll just make a effort to
control the spin Steve is trying to impart here.

Steve Dimse wrote:

> On 1/8/00 2:14 AM Jeff King (jeff@aerodata.net) wrote:
>
> >And tell me exactly how you noticed this "commonality" between the
> >BOD and the Dandin Group? You most certainly did not notice it
> >by any explanation in PSR or from the BOD. You noticed it
> >because a concerned member brought it to the groups attention.
> >
> >I'd prefer to hear it directly from the BOD rather then guess as to
> >the reasons. Wouldn't you?
> >
> The commonality was never hidden, nor was any reason seen to publicize
> it.

Never said it was. Just not disclosed. And in fact you are wrong about
"nor was any reason was seen to publicize it".... its my understand the
decision was NOT unanimous not to disclose among the BOD/officers
of TAPR.

> The whole point of having a Board of Directors is to delegate
> authority to a few people who have a better chance of making things
> happen in a small group setting.

Right, but there is something else you need to be aware of.

Its my understanding under Arizona corporate law, members, who are
in fact shareholders, and are allowed to attend these BOD meetings.

Yet we never see the meeting rooms/times announced (they typically
are at the DCC and Dayton). And private e-mail requesting the locations
times of these meeting often is not responded to.(such as this one which
would have covered the BOD meeting in question).

Jeff King wrote on 4/20/99
>Also, is there a BOD meeting at Dayton or is that just at the DCC? If so,
>when/where.

Might you have a suggestion to rectify this?

> Until now I have chosen to keep something quiet, but perhaps this will
> help people see things in a different light. Close to 2 years ago, when
> there was a danger of the spread spectrum project getting canceled due to
> lack of funds, I donated $3000 to the project.

This is good, in fact very good that you did this. But it has nothing directly
to do with the thread at hand....

Or maybe it does..... its my understanding others, that are not BOD members
also donated money. Where they given full disclosure, just as you were
given?

> In fact, because of my donation, the
> deal was cleared through me, separate from my involvement as a board
> member.

OK, so your saying that everyone that donated to the project, BOD member
or not, the deal was cleared through? I take it that John Coonly, Andrew
Skattebo, KA0SNL, Gene Pentecost, W4IMT and other donators had
the chance you did? And then of course the question becomes, as members
money was also used, how did the BOD make the distinction between the
two groups?

Either way, I don't have that much of a problem with the above. I just
questioned the previously undisclosed connection between the TAPR
officer's and the Dandin Group.... which Greg has now fully addressed.

> Like many contracts, both parties feel it is in their best interests that
> the details remain private. The details of the TAPR-2 licenses are not
> public knowledge either, even after all these years,

WRONG. I have the paperwork in front of me to license the TNC-2
design for ~$500 and a small royalty. Lyle Johnson was more then
happy to send it to me. It has always been TAPR's policy to license its
designs on a non-exclusive basis. This policy was again re-affirmed in
a membership poll published in the Winter 1996 PSR.

So what is in fact unusual about the Dandin deal was that it appears
to be exclusive (this question has yet to be fully answered) and that it also
involved some "commonality" between the leadership of both groups.
Considering the size and scope of the SS radio project, and the
divergence from TAPR's standards of practice in the past, some explanation
should have been offered to the membership, which in fact now has been
done.

While we can debate on and if you had a legal requirement to disclose
to the membership, most certainly it is the right thing to do by the
membership. I think you'll find the BOD's fears that this would be a
"big stink" to the membership is unfounded. I in fact think Greg/BOD
will be given high praise for making what appears to be a pragmatic
business decision that salvaged the product, now that full disclosure
has been made.

> I further testify that I was not involved, nor to the best of my
> knowledge were any other TAPR board members involved, in the
> assasinations of JFK, RFK, and MLK. The grey skinned, large eyed entity

Considering more members then just myself were concerned about this, you
really do have quite a pompous and arrogant attitude towards the
membership, don't you? There is always 2002 I guess.

-Jeff

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] Re: [OT] TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Sat, 08 Jan 2000 18:56:47 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59165-2000.01.08-18.14.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greg Jones wrote:

>
> Jeff King wrote:
> >Also, for the record, it needs to be noted that I and others
> >wrote and/or called just about every BOD member on this issue
> >with little or no direct response. So taking the "unsavory" method
> >of asking these same questions in public was not my first choice.
> >
>
> and I believe that Steve Stroh, Bob Hansen, and John Ackermann all sent you
> email regarding that note you sent to the board before this thread was
> begun.

Your 110% correct. And you also wrote me back too. However, not a
single one of you actually answered my questions. I'd be more
then happy to post them to the list to let everyone else decide this, but I
fail to see what this will do. Why don't we just move on, as you idea of
the other msg group was good.

-Jeff

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34. [ss] Group Purchase?

From: Jeff King <jeff@aerodata.net>
Date: Sat, 08 Jan 2000 19:53:20 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59171-2000.01.08-19.10.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Greg Jones wrote:

> 5. Group Purchases

> We have tried doing other deals, but the simple fact is that
> no Part 15 (aka license exempt) company is going to sell in bulk to
> amateurs radio operators who, because they can use more power and better
> antennas, are likely to interfere with their primary customer base, or
> spend time dealing with what they perceive to be a market outside their
> business plan.

Good point. Let me suggest, that anyone contemplating such a quest,
not even mention amateur radio. My response will be, if asked, that
they are for "educational use". Which actually is true. And there is
no reason to even mention amateur radio, as the delivered product
is in fact a part 15 device. We, as amateur radio operators, can
now legally make the device non-part 15 complaint.

Anyways, distribution won't give a hoot... they just want to move
product.

> The price points on many of the radios are just too steep for
> the "amateur radio operator" to buy. I don't find it difficult to plop
> down $1500 here or there for SS equipment, but then again I am not a
> "normal" person.

Things have changed. Anyone off this list, on Monday, can buy a FreeWave
radio for $700. A group buy could easily lower it to $500. I'd not suggest
mentioning TAPR or ham radio, as the are sensitized to this, but I've been
doing it for quite some time. In fact,
there is quite a bit of equipment under the $600 price point that is well
suited to amateur experimentation.... there are even a few on here using
$149 Proxim Symphony cards to span multi-mile links.

But what are our constraints on such a quest, Greg?

There will be two distinct classes of wireless gear we will be seeking
out..... consumer stuff (like the Proxim Symphony) and more
pro gear like the BreezeCom equipment. I doubt we will get any
consideration at all on the Proxim consumer stuff but we may a
discount on the more professional stuff.

So here are some questions that come to mind which would help
anyone in this quest. They are:

1. Will TAPR allow us to ask for educational/non-profit discounts? This
of course would have to be done in the TAPR name, and would often
allow a 10-30% price reduction, which either could be passed on to
the TAPR member or pocketed as a handling charge for TAPR.

2. Would TAPR be willing to act a conduit through a distributor such
a INGRAM or BELL MICRO? Typically we can get very good prices
through these distributors, but they are unwilling to deal directly with
the end users. For example, I have bought Proxim Symphony cards
for $120 through distribution (through my corp).

3. And as I asked above, is there any vendor TAPR wishes us to
avoid?

4. Anyone have any suggestions on equipment to target? It seems
like the best price/performace target these days seems to be
BreezeWave, but I have no experience with this.

Sounds like a plan.

-Jeff

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] Re: Is the the FHSS radio obsolete by now?

From: Luis Yanes <melus@bart.us.es>
Date: Sat, 08 Jan 2000 01:50:30 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59173-2000.01.08-19.30.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This post (long) are related more to the general ham SS way of doing
things, same as the FPGA industry with their tools and IP designs in
the idea that if you want to know, must pay for it, and even probably
won't let you know, just use it.

Dale Heatherington wrote:
>
> However, interest in this resource is low to non-existant. Very few hams
> seem motivated to do high speed RF networking. (high speed relative to 1200
> baud that is) Perhaps if the hardware cost $100 and was plug and play on
> USB and used a built in rubber duck antenna interest would increase :-)

Few hams are motivated becouse there isn't anyone near them with
something that they haven't and could try. And spending over $1000 even
locating other local ham interested isn't easy at all just to try.

Certainly most people won't make their one and will want to buy it
ready to use when realize that there is some guys next door that built
their SS link gear with surplus parts, but is too difficult for them
but want have it.

The starting point therefore is that those guys had enought info to
build something that works, to modify to suit their needs. To add
presence in the bands where others could look and increase the general
interest level.

I've said this much times before, you sort or say other way if want:

No info -> No experimenters -> No services
No services -> No interest -> No network -> No users -> No services

But since near all of the SS scene are aimed to commercial interests

and not sources are freely available to build a complete system, or
even to understand the way they are done, all efforts are stuck until
a critical level of acceptance of such system are reached in a zone
to have users of these systems, but not experimenters of them.
The experimenters must build their gear from scratch, can't reuse SS
building blocks designed by others, but the simplest.

Also any progress will be done by batchs, when the first generation of
the commercial product are obsoleted by a new one, if ever, that could
take ten or more years, and must compete with all the commercial stuff
changing an order of magnitude faster and widely available. Althought
not amateur radio.

I personally think that an open design are a far better way to do
things in amateur radio, and in the future will be even more if we
want to keep an acceptable number of experimenters in our hobby.
This will allow continuous improvement of the designs and wide spread
of the infrastructures, that for sure will give commercial profits
once triggered the interest of unskilled hams, that sadly for sure
are the most, that never will build their one, but will pay for it.
But the authors owns their designs and is their choice to give them
to others just for free.
--
73's de Luis

mail: melus@bart.us.es
Ampr: eb7gwl.ampr.org
http://www.esi.us.es/~melus/   <- Homebrewed Hardware Projects with PCBs

---
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36. [ss] Re: [OT] TAPR conflict of interest?

From: Steve Dimse <k4hg@tapr.org>
Date: Sun, 9 Jan 2000 01:00:03 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59241-2000.01.09-00.16.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 1/8/00 6:55 PM Jeff King (jeff@aerodata.net) wrote:

>As Greg has already addressed this, I'll just make a effort to
>control the spin Steve is trying to impart here.
>
It seems to me that most of this message is just another attempt to beat
the conspiracy drum, and I do not feel this justifies any additional
bandwidth. There is a specific point I'd like to respond to, however.

>> I further testify that I was not involved, nor to the best of my
>> knowledge were any other TAPR board members involved, in the
>> assasinations of JFK, RFK, and MLK. The grey skinned, large eyed entity
>>spotted at TAPR board meetings is not an alien but just one of the SS
>>team members that has spent far too much time peering through a 'scope
>>soldering SMT parts. And finally, the persistant rumors that The King
>>gave a private concert following the Board meeting in Phoenix are pure
>>speculation.
>
>Considering more members then just myself were concerned about this, you
>really do have quite a pompous and arrogant attitude towards the
>membership, don't you? There is always 2002 I guess.
>
I think most people recognize that this remark was not aimed towards the
membership in general. It was meant as a humerous satire of those who are
determined to invent conspiracies where there are none, whether inside or
outside of TAPR. An incredibly tiny percentage of the TAPR membership
fits this description.

As to 2002, re-election is something I have given no thought to. Through
the remainder of my three year term I will continue to represent the
membership of TAPR to the best of my ability. I will not tailor my
actions in an attempt to placate individual vocal members who dislike
myself or my decisions. If I choose to run for re-election, I will place
my record of accomplishments before the membership in the customary
statement published in the PSR along with all the other candidates, and
leave it to the membership to decide. Should I lose the election, I will
continue to work in other ways that interest me for the benefit of TAPR
and ham radio in general. It won't adversely affect my life a bit if the

membership feels another person would serve their interests better. It
might even improve my life somewhat, as few of the duties of board
membership are enjoyable to me. This is something I do because I believe
it is important, and I believe I can make a difference.

Steve K4HG

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37. [ss] Re: [OT] TAPR conflict of interest?

From: Jeff King <jeff@aerodata.net>
Date: Sun, 09 Jan 2000 03:27:54 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59258-2000.01.09-02.43.32--lyris.ss#tapr.org@lists.tapr.org>
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This apparently needs to be repeated:

Greg Jones, a TAPR BOD member, stated:

> In the meantime, I want to answer at
> least some of the questions raised. I also want to say that with hindsight
> we should have addressed some of these issues earlier. Although I firmly
> believe that TAPR is doing -- and has done -- the right thing with respect
> to this project, we should have been more forthcoming. As noted near the
> bottom of this message, the Board recognizes that we need to improve
> communications on organizational matters, and we're taking actions to
> address that.

[the rest of this succinct and thorough response deleted]

That seems to addressed the issue(s), as well as taken steps to insure
they do not occur again. I'm happy and I think TAPR will be a
better organization for this.

Then we see Steve Dimse, another BOD member, who writes:

> On 1/8/00 6:55 PM Jeff King (jeff@aerodata.net) wrote:
>
> >As Greg has already addressed this, I'll just make an effort to
> >control the spin Steve is trying to impart here.
> >
> It seems to me that most of this message is just another attempt to beat
> the conspiracy drum, and I do not feel this justifies any additional
> bandwidth.

Sure it does.... you just accused me of trying to incite conspiracy
theories. What _exact_ conspiracy was I trying to incite?

It seems to me questions were just being asked of the board... questions
that needed to be answered. If you want to call this a "conspiracy theory"
then you are mistaken. But judging from the response we
got yesterday, these concerns were legitimate and actions will be
taken to see they don't occur again.

I'm sorry you appear to be unhappy with this, but I personally think
more openness will make TAPR a better organization.

> There is a specific point I'd like to respond to, however.

As do I...

> >> I further testify that I was not involved, nor to the best of my
> >> knowledge were any other TAPR board members involved, in the
> >> assasinations of JFK, RFK, and MLK. The grey skinned, large eyed entity
> >
> >Considering more members then just myself were concerned about this, you
> >really do have quite a pompous and arrogant attitude towards the
> >membership, don't you? There is always 2002 I guess.
> >
> I think most people recognize that this remark was not aimed towards the
> membership in general. It was meant as a humerous satire of those who are
> determined to invent conspiracies where there are none, whether inside or
> outside of TAPR.

Your remarks, as a TAPR BOD member, and in my opinion, cheapened
Greg's well authored response to this issue. As I know you typically do

what you want, I doubt if your comments represent any change of
Greg's position, none-the-less, both your timing (coming minutes
after Greg's posting) and comments were poorly thought out.

> An incredibly tiny percentage of the TAPR membership
> fits this description.

Again, who do you have in mind when you make these accusations?
If it is I that you speak of, as a 15+ year TAPR member who cares
about his organization, then I am happy to be part of this "incredibly
tiny percentage".

Hopefully, with the new membership group that is starting, this
"incredibly tiny percentage" of members can grow. Some of us want
to be more then "end users" and would like to contribute actively
to the organization.... a lot more then you might think.

I suggest you just accept the reality of this, which is its face
value. That is, some TAPR members were asking serious questions,
questions that should have been answered, and that were avoided
until this time. These questions have now been answered, and steps
are being taken to make sure situations like this don't happen again.
There is no need to invoke the name of Elvis, search the skies for Aliens
or run to the top of the nearest grassy knoll. All seems as it is.

-Jeff

P.S. As a general comment, there seems to be a certain percentage of
people that feel expressing a legitimate concern about one aspect of an
organization is the same as condemning it as a whole. It most certainly is not,
nor was it intended in any way here.

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38. [ss] Re: [OT] TAPR conflict of interest?

From: Dirk Koopman <djk@tobit.co.uk>
Date: Sun, 09 Jan 2000 11:31:20 -0000 (GMT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59265-2000.01.09-05.47.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 09-Jan-2000 Jeff King wrote:

many interesting things, but please, could I move "next business".

Dirk G1TLH
--
Dirk-Jan Koopman, Tobit Computer Co Ltd
At the source of every error which is blamed on the computer you will find
at least two human errors, including the error of blaming it on the computer.

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39. [ss] [SOT] complementary data radios.

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Sun, 9 Jan 2000 09:50:36 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59296-2000.01.09-09.06.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

since it looks like it's going to be another 6 to 9 months before the
spread spectrum boards will be ready, I decided to take the plunge and
play with an alternative high-speed option. I'm speaking about the
Slovenian BPSK radios. They are rated at 1.2 Mbps in the 23 and 13 cm
bands. They look relatively low-tech when compared to spread spectrum
but the user reports sound good.

ordering the radios is a bit of a pain. you need to establish contact
with Sine Mermal <s53rm@lea.hamradio.si> and asked him about the
radios. I've ordered three partial kits of the 23 cm bpsk data radios
and the partial kits of the high-speed serial card. The Linux drivers

are on the net and he is translating the documentation (I hope) into
English.

for the three partial kits mentioned above, it cost me roughly $540
including Western Union transfer fees ($53) by the time always said
and done, I had a $35 credit which isn't bad considering all of the
"fuzziness" in the transaction.

theoretically the kits were shipped on January 3rd and should take
between 10 to 15 days to reach here.

the reason I'm bringing this alternative to the attention of the group
is that in addition to the "last mile" intended use of the spread
spectrum radios developed in TAPR, there is a need for backbone
radios. I'm firmly convinced that any backbone link will need to be a
full duplex link in order to keep latency low.

I may be suffering from a bad case of ignorance but it seems to me
that spread spectrum radios can't operate full duplex in the same band
but we will need to instead fall back on traditional wideband repeater
type technology.

anyway, it seems to me that reengineering the Slovenian radios to
operate in full duplex mode would be an interesting project and nicely
complement the spread spectrum radios currently under development.

I am interested in hearing what others have to say especially if it is
correcting my ignorance on any topics relating to networks or radios.

Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
This message was composed almost entirely using NaturallySpeaking

The phrase "computer literate user" really means the person has been
hurt so many times that the scar tissue is thick enough so he no
longer feels the pain. -- Alan Cooper, The Inmates are Running the Asylum

---
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40. [ss] Re: [OT] TAPR conflict of interest?

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Sun, 09 Jan 2000 09:21:50 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59304-2000.01.09-09.37.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve Dimse wrote:
>
> On 1/8/00 6:55 PM Jeff King (jeff@aerodata.net) wrote:
>
> >As Greg has already addressed this, I'll just make a effort to
> >control the spin Steve is trying to impart here.
> >
> It seems to me that most of this message is just another attempt to beat
> the conspiracy drum, and I do not feel this justifies any additional
> bandwidth. There is a specific point I'd like to respond to, however.

It is my considered opinion that most everyone pondering this issue
needs to give the keyboards a couple of days off and calm down.

Steve, Steve and Greg have made explanation. Others have commented on
everything from the conspiracies to the content.

IT'S OVER.

Thank you.
--
Gerry Creager   Mapping Sciences Laboratory
409.845.7201 Office   Texas Agricultural Experiment Station
409.845.2273 Fax   Texas A&M University System
409.228.7686 Pager (preferred)   College Station, Texas 77843-2120
gerry@page4.tamu.edu   Pager: 4092287686@mobile.att.net
"Opinions expressed are mine and do not necessarily represent those of
Texas A&M University."

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41. [ss] Re: [OT] TAPR conflict of interest?

From: "C Byers" <crlbyers@garlic.com>
Date: Mon, 10 Jan 2000 02:01:28 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59549-2000.01.10-04.16.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

----- Original Message -----
From: Steve Dimse <k4hg@tapr.org>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Sent: Saturday, January 08, 2000 10:00 PM
Subject: [ss] Re: [OT] TAPR conflict of interest?

> On 1/8/00 6:55 PM Jeff King (jeff@aerodata.net) wrote:
>
> >As Greg has already addressed this, I'll just make a effort to
> >control the spin Steve is trying to impart here.
> >
> It seems to me that most of this message is just another attempt to beat
> the conspiracy drum, and I do not feel this justifies any additional
> bandwidth. There is a specific point I'd like to respond to, however.

Yes, I agree ! I'm satisfied that TAPR is doing the right thing ! Let more on to technical stuff, and ignore those who are trying to disrupt and create wars.

73's de Carol, W9HGI, Westcoast Satellite Gateway

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42. [ss] Re: [OT] TAPR conflict of interest?

From: "Darryl Smith" <vk2tds@ozemail.com.au>
Date: Mon, 10 Jan 2000 18:09:51 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59600-2000.01.10-13.19.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day

I am not all that interested in comspiricies etc. But as a member of TAPR that because of geography is unable to more fully participate in TAPR, as much as I would like to I am disappointed about the aggreement between the DANDIN group and TAPR.

I belive that even if there is no conflict of interest in this agreement (and there is no evidence that there is), there is a certain perception that there has been a cover up given the information that has come out about the members of the DANDIN group.

I had no idea who the DANDIN group were. I belive most members had no idea either.

But let's move on. Lets do some real work. It is a pity that SS cannot get this sort of traffic normally

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]

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43. [ss] Re: Is the the FHSS radio obsolete by now?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Mon, 10 Jan 2000 15:39:30 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>

Message-ID: <LYR6751-59617-2000.01.10-15.54.46--lyris.ss#tapr.org@lists.tapr.org>
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I agree with Eric's analysis, but I would like to add that the 1996 work by Tim Shepard (IP guru) on his theoretical radio network could be applied to FHSS and solve the near/far (hidden tranciever) problem with dynamic spreading codes and multiple variable-power transciever chips.

The commercial ISM products available today are compromises at best, and commercial interests will prevent standardization by competing for market share. The price for this stuff is not at the commodity level pricing a Shepard type network would need.

Given there's unexplored potential, and the TAPR FHSS project will provide fundamental understanding to TAPR participants, I would hate to see it disappear. If you look at the Shepard idea, you get the idea that there are amazing possibilities for FHSS packet radio that commercial R&D may never take an interest in.

"Eric S. Johansson" wrote:

> On Thu, 6 Jan 2000, Johan wrote:
>
> >
> > Considering that there are many cheap 11 Mbps wireless ethernet solutions
> > available in the market is this radio obsolete? For example, Wavelan
> > WaveACCESS and AirEzy. The long distance range of these solutions, though
> > not quite there, also appear to compete with the 20 mile range of the TAPR
> > radio. AirEzy claims in their FAQ to get a range of 15 miles with a power
> > booster http://www.ezylink.com/faq/index.html
>
> the answer is is not a simple one. As I see it, when you deal with a
> RF digital systems, you really have two subsystems. First is the RF
> interface which deals with all of the issues relating to squirting
> bits via RF and the second is the network interface which deals with
> squirting bits via 10BaseT or some other interface. The cheap
> wireless networking solutions only solve half of the problem which is
> the RF side. The network interface still needs work.
>
> Second, it's really really hard to get 11 Mb data rates at 20 miles.
> The reality is you'll more likely see 0.5 to 1 Mb data rates. Still
> respectable but not 11. Don't forget also that the 11 Mb data rate is
> the raw bit rate and the real bit rate is more like seven Mb and then
> you lose another 30 percent to protocol overhead. So an 11 Mb radio
> gets you five Mb real bandwidth.
>
> Third, these cheap wireless solutions work in the ISM bands. One of
> the reasons for doing our own spread spectrum care is so that we have
> a reason to keep access to the boat loads spectrum were not exactly
> using at 900 MHz and up. If we can get by with using the ISM bands,
> then there is no reason for us to keep exclusive ham bands
> allocations.
>
> Now, I believe it should be possible to re-engineer some of these
> cheap wireless solutions to ham spectrum allocations but someone needs
> to come up with the money to convince a company to do this. Unless of
> course, there is a ham in one of these companies that is willing to
> spend their own time advocating releasing reference designs or even
> working on modifying the existing design to work in the ham radio
> allocations.
>
> once you have the radios, then have the whole issue of engineering
> paths. It's not like VHF repeaters where you find a high point, pump
> out a bunch of power and you can blanket the huge area with coverage.
> I was fortunate enough to be able to gain access to a path analysis
> program recently and I tried to figure out if there were any paths
> between myself and a half a dozen nearby hams. Nearly everyone had
> some form of obstacle between themselves and most of the group. This
> tells me that if we were able to find a common high point, we would
> still have serious problems with hidden transmitter issues unless we
> were operating in classic repeater mode and able to use the repeaters
> output as a way of managing collisions.
>
> This is probably not new to folks with lots of packet radio experience
> but I will say it was quite discouraging and highlights the importance
> of complete network design and not just node design.
>
> --- eric
>
> Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us

> This message was composed almost entirely using NaturallySpeaking
>
> ---
> You are currently subscribed to ss as: mcmillan@cboe.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

44. [ss] alternative devices

From: Eric Johansson <esj@harvee.billerica.ma.us>
Date: Tue, 11 Jan 2000 11:57:26 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59769-2000.01.11-11.13.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.maxim-ic.com/showcase_2463.htm

here is an interesting design available. now, I raise the question: is
it worth building full duplex data radios around bits like these? for
example for use in the 219-220 data band. ....

from the arrl web page...

The FCC has allocated 219-220 MHz to amateur use on a secondary basis.
This allocation is only for
fixed digital message forwarding systems operated by all licensees
except Novices. Amateur
operations must not cause interference to, and must accept interference
from, primary services in this
and adjacent bands. Amateur stations are limited to 50 W PEP output and
100 kHz bandwidth.
Automated Maritime Telecommunications Systems (AMTS) stations are the
primary occupants in this
band. Amateur stations within 398 miles of an AMTS station must notify
the station in writing at least
30 days prior to beginning operations. Amateur stations within 50 miles
of an AMTS station must get
permission in writing from the AMTS station before beginning operations.
ARRL Headquarters
maintains a database of AMTS stations. The FCC requires that amateur
operators provide written
notification including the station's geographic location to the ARRL for
inclusion in a database at least
30 days before beginning operations. See Section 97.303(e) of the FCC
Rules.

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45. [ss] Re: Is the FHSS radio obsolete by now?

From: "Hunter, Bob" <Bob_Hunter@ATK.COM>
Date: Tue, 11 Jan 2000 12:15:57 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59810-2000.01.11-12.32.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Eric,
Very good point. A puzzle that I have, as yet, been unable to solve.
Bob aa0fg

Robert S. Hunter PE
Senior Principal Development Engineer
Alliant Techsystems Inc.
Telephone: 612.931.7619
Facsimile: 612.931.6512

> ----------
> From: Eric S. Johansson[SMTP:esj@harvee.billerica.ma.us]
> Reply To: TAPR Spread Spectrum Special Interest Group
> Sent: Thursday, January 06, 2000 5:53 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Is the the FHSS radio obsolete by now?

>
> So, what sufficiently compelling application would justify putting in
> place a network of digital repeaters at 900 MHz and up?
>
> --- eric
>
> Eric S. Johansson   esj@inguide.com esj@harvee.billerica.ma.us
> This message was composed almost entirely using NaturallySpeaking

---
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46. [ss] Re: Is the FHSS radio obsolete by now?

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 11 Jan 2000 13:25:10 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59815-2000.01.11-12.41.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

[ss] Re: Is the the FHSS radio obsolete by now?
>>
>> So, what sufficiently compelling application would justify putting in
>> place a network of digital repeaters at 900 MHz and up?
snip

I don't know about everybody else but I am interested in using SS for voice.

Ron Schroeder
WD8CDH
E. E. S.
rjs@bnl.gov
ron@112motors.com
516 344-4561
516 286-5677

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47. [ss] Re: Is the FHSS radio obsolete by now?

From: "Hunter, Bob" <Bob_Hunter@ATK.COM>
Date: Tue, 11 Jan 2000 12:28:27 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-59818-2000.01.11-12.45.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ron,
This certainly seems like a good starting point! I expect that a voice only
system would be easier to set up than one that had to be interfaced with a
digital network.
Bob

Robert S. Hunter PE
Senior Principal Development Engineer
Alliant Techsystems Inc.
Telephone: 612.931.7619
Facsimile: 612.931.6512

> ----------
> From: Ron Schroeder[SMTP:rjs@bnl.gov]
> Reply To: TAPR Spread Spectrum Special Interest Group
> Sent: Tuesday, January 11, 2000 12:25 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Is the FHSS radio obsolete by now?
>
>   [ss] Re: Is the the FHSS radio obsolete by now?
> >>
> >> So, what sufficiently compelling application would justify putting in
> >> place a network of digital repeaters at 900 MHz and up?
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> I don't know about everybody else but I am interested in using SS for
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> ---
> --
> --------
> Ron Schroeder

> WD8CDH
> E. E. S.
> rjs@bnl.gov
> ron@112motors.com
> 516 344-4561
> 516 286-5677
>
> ---
> You are currently subscribed to ss as: BOB_HUNTER@ATK.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

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48. [ss] a potentially compelling application?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Thu, 13 Jan 2000 18:41:45 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-60357-2000.01.13-17.58.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I was reading an article about the Sprint/MCI merger and saw a
statement by Bernard J. Ebbers claiming to provide open access for
broadband wireless Internet services as well as accelerating access to
rural areas.

the article can be found at:
http://www.internetnews.com/isp-news/article/0,1087,8_281551,00.html

an interesting quote from the article:

The Federal Communications Commission has made it a priority for the
industry to find a way to span the "digital divide" and develop
broadband access to under served communities. By committing the merged
company to developing such a network, MCI-WorldCom is offering the
federal regulators the means to exit from the open access debate by
approving of the pending deal.

I'm probably flogging a dead horse with this idea but I still think
amateurs providing Internet access has some merit. Considering the
FCC's goal and our public service charter, it seems like a natural
match.

--- eric

Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
This message was composed almost entirely using NaturallySpeaking

---
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49. [ss] RE:a potentially compelling application

From: "Edward J." <root@worldnet.att.net>
Date: Thu, 13 Jan 2000 20:59:25 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: esj@harvee.billerica.ma.us
Message-ID: <LYR6751-60370-2000.01.13-20.09.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

IMO This proposal,implemented,would give ham radio a necessary
shot-in-the-arm.

    For openers, the League could show the way by providing an ss gateway
in its area as a model/example for providing under-served community
access.

    Not at all a dead horse.

Edward J.O'Connor   ttm@att.net   Linux
732 721-3342   W2TTM   Crafted

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

50. [ss] RE:a potentially compelling application

From: Jeff King <jeff@aerodata.net>
Date: Thu, 13 Jan 2000 21:32:47 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: esj@harvee.billerica.ma.us
Message-ID: <LYR6751-60372-2000.01.13-20.48.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Edward J." wrote:

> IMO This proposal,implemented,would give ham radio a necessary
> shot-in-the-arm.

Only hams care about ham radio. Instead of trying to market this
stuff to hams, who just don't care, why not try slash-dot? (with
credit to Steve S. for this specific venue suggestion)

>   For openers, the League could show the way by providing an ss gateway

The "League" will just get in the way. And they most certainly will stand
in the way of any removal of content/encryption restrictions, which do need to
go if you even hope to have a remote chance to have this succeed.

>   Not at all a dead horse.

No, not at all. Just don't try and sell ice to eskimos.

I'd think in rural areas, this might stand half a chance of working in the form of
community networks. Use Part 15 LAN/WAN devices to share bandwidth.
Yeap, and you can charge for the membership to defer the prices. No
different then a auto patch.

-Jeff

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51. [ss] Inventor of FHSS dead

From: Robert McGwier <rwmcgwier@home.com>
Date: Thu, 20 Jan 2000 08:38:34 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-61636-2000.01.20-07.35.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The inventor of FHSS, Hedy Lamarr has died.
She had other minor things for which she was
famous but this is the most important achievement
of her very interesting life.

"I read the patent," Franklin Antonio, chief
technical officer of the cellular phone maker
Qualcomm Inc., said in 1997. "You don't usually
think of movie stars having brains, but she sure
did."

Bob

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52. [ss] Re: [amsat-bb] Inventor of FHSS dead

From: Robert McGwier <rwmcgwier@home.com>
Date: Thu, 20 Jan 2000 14:52:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>

Message-ID: <LYR6751-61699-2000.01.20-13.48.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thursday, 20 January, 9:53 a.m.
O R L A N D O , F L A . (AP)

HEDY LAMARR spent the last decades of her life much as she spent the first: scorning the glamorous image that made her a Hollywood star.

Neighbors said the Austrian-born movie siren often collected her mail under the cover of night, grasping a cane in one hand and a flashlight in the other.

"Any girl can be glamorous," the actress, once billed as the world's most beautiful woman, told The Associated Press in 1942. "All you have to do is stand still and look stupid."

Miss Lamarr, who was both a Hollywood pinup and a born tinkerer once granted a communications technology patent, was found dead in her home Wednesday. She was 86.

She first achieved international fame and notoriety as a result of the 1933 Czech film "Ecstasy," in which she acted in a steamy love scene and appeared nude in a 10-minute swimming sequence.

Hollywood, while decades away from such frankness, recognized a beautiful face and the value of the publicity "Ecstasy" engendered.

After a few years away from the camera as the wife of Fritz Mandl, an Austrian munitions magnateMiss Lamarr was signed by MGM and brought to the United States in 1937.

Her American film debut came in 1938 with "Algiers," co-starring Charles Boyer. She played a wealthy adventurer and became a box-office sensation despite grousing by Boyer that she couldn't act.

In its review, the show biz paper Variety disagreed. "She brings to the picture an abundance of good looks, acting talent and enticement," it said, adding that with a little encouragement, "nothing apparently stands between her and success in Hollywood films."

She epitomized smoky glamour in a string of movies in the 1930s and '40s, including "Tortilla Flat," in which she played a woman who was part-Mexican; "White Cargo," playing a slave woman; and "Lady of the Tropics."

One of her most successful films was the 1949 "Samson and Delilah," directed by Cecil B. DeMille, with Victor Mature as Samson. She got a rare chance to try comedy in "My Favorite Spy," a 1951 Bob Hope film.

"She was one of the most beautiful women in film and a great pleasure to work with," Hope said Wednesday.

Miss Lamarr was reputedly the first choice of producer Hal Wallis for the heroine Ilsa in the 1943 classic "Casablanca," but the part eventually went to Ingrid Bergman.

The daughter of a banker, Miss Lamarr was born Hedwig Eva Maria Kiesler on Nov. 9, 1913, although some references say 1914 or 1915. Her screen name was said to be an

homage to the 1920s screen beauty Barbara La Marr.

She was married and divorced six times - to Mandl, screenwriter Gene Markey, actor John Loder, nightclub owner Ernest Stauffer, oil millionaire W. Howard Lee and lawyer Lewis W. Boies Jr.

She adopted a son, James, and had two children with Loder, Anthony and Denise.

During World War II, Miss Lamarr showed off another side when she came up with the idea of a radio signaling device that would reduce the danger of detection or jamming.

Drawing on her knowledge of military products that she picked up while married to Mandl, Miss Lamarr and a friend, composer George Antheil, developed the idea further and received a patent in 1942.

The method she developed was not used at the time but since the '80s, high-tech versions of the concept, called "spread spectrum," have been used in some cordless phones, military radios and wireless computer links.

"I read the patent," Franklin Antonio, chief technical officer of the cellular phone maker Qualcomm Inc., said in 1997. "You don't usually think of movie stars having brains, but she sure did."

Miss Lamarr said she was "interested in everything."

"When I was a little girl, just 4 years old, I remember my father had a gold watch. And I asked "Why does this in front go around, how does this work?" Miss Lamarr told the AP in 1997.

She once wanted to work at National Inventors Council in Washington, D.C., but was told she could do more for the fight against the Nazis by using her star status to sell war bonds.

"She's been forgotten. But she contributed so much to an older generation. A lot of men fell in love with her. And now the younger generation is benefiting from the unknown creative work that she did," her son, Anthony Loder, said in 1997.

Her acting career faded in the mid-'50s, when she appeared in some Italian productions. Her last film was "The Female Animal" with Jane Powell in 1958.

She said her career suffered because she wouldn't sleep with a VIP just to get ahead. "My problem is I'm a hell of a nice dame," she said in a 1970 interview.

Her 1966 autobiography, "Ecstasy and Me," filled with sexy anecdotes, some of them involving other women, became a best seller. But she later sued, saying the manuscript prepared by the ghostwriter was full of distortions and errors.

A pair of shoplifting arrests - neither of which resulted in convictions - and a series of lawsuits against companies she said were misusing her likeness - caused headlines in her later years.

"I'm sick and tired of being in the limelight,"
Miss Lamarr told a New York radio station
after the second shoplifting incident.

See also:

http://www.german-way.com/cinema/lamarr.html

At 02:10 PM 01/20/2000 Thursday , you wrote:
>>The inventor of FHSS, Hedy Lamarr has died.
>>She had other minor things for which she was
>>famous but this is the most important achievement
>>of her very interesting life.
>>
>>From a news story carried by @home news service
>>quoting N6NKF:
>>
>>"I read the patent," Franklin Antonio, chief
>>technical officer of the cellular phone maker
>>Qualcomm Inc., said in 1997. "You don't usually
>>think of movie stars having brains, but she sure
>>did."
>>
>>Bob
>
>Bob-
>
>Can you forward the article to me or tell me where I can read it?
>
>Thanks, Dennis
>
>
>   / / / / /   * Dennis Dinga   * dennis@dinga.com
>   /--/--/--/--/   * 1024 Twin Canyon   * n6dd@amsat.org
>   / / /| / / N6DD * Diamond Bar, CA 91765 * Tel: 909-860-1515
> | * USA   * Fax: 909-860-3685

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53. [ss] Transverter for the TAPR project

From: "Hamoperator SM7UGT Marcel bos" <sm1ugt@hotmail.com>
Date: Mon, 24 Jan 2000 05:36:31 PST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-62380-2000.01.24-07.33.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Okey they say now that the TAPR Spreadspectrum Modem will have to wait until
april. Now - while I wait I would like to ask for some pointers - if there
is possible to construct a 900>430 Transverter for the TAPR project?

_____
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54. [ss] Re: Group Purchase?

From: Mike Dent <mike@dent.org>
Date: Mon, 24 Jan 2000 15:40:11 +0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-62384-2000.01.24-08.13.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jeff King wrote:
>
> Greg Jones wrote:

>
>
[text deleted]

> But what are our constraints on such a quest, Greg?
>
> There will be two distinct classes of wireless gear we will be seeking
> out..... consumer stuff (like the Proxim Symphony) and more
> pro gear like the BreezeCom equipment. I doubt we will get any
> consideration at all on the Proxim consumer stuff but we may a
> discount on the more professional stuff.

Slightly off subject to the main thread....

has anybody done any design of antennas for the 2.4Ghz ISM band?
A while ago when I first played with some Lucent Wavelan cards I bought
in some Tonna 25 element yagis centered on 2.46Ghz. Whilst these
antennas worked
well in dry conditions over a 5 miles LOS path, when it begun to rain
the rx signal dropped off to nothing, only starting to resume in
strength when the
ground and roofs dried out. I tried switching polarisation but still the
same effect. I beleive it may have been caused by house roofs near to my
house end
dispersing the signal and altering its phase. The remote end of the link
is well elevated.

I changed these antenna to some stupidly expensive circular polarisation
jobbies and this fixed the problem.

Now I want to do some more "experimentation" but am looking for a simple
design, dimensions etc, perhaps for a helix antenna with about 18dbi
gain?

Can anybody point me to anything similar?

Thanks
Mike

[text deleted]

--
Mike Dent, Morecambe, Lancs. UK | <http://www.lancs.ac.uk/staff/dentm>
email <mike@dent.org>, Amprnet <g6phf@gb7mbb.ampr.org>
PGP fingerprint: 44 F5 22 C4 CB A2 3F 9F 73 9C 02 9F 0B 16 55 72

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

55. [ss] [ss]Re: Group Purchase?

From: Roger Boggs <roger@overlan.com>
Date: Tue, 25 Jan 2000 08:26:21 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-62523-2000.01.25-07.12.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mr. Dent:

http://www.conifercorp.com

The link above has some real nice 2.4GHz ISM band antennas that work very
well and aren't prohibitively expensive. We sell them with our line of
wireless bridges and IP Routers and they do a real good job. Haven't had
any problems with them at all.

Roger Boggs
C-Spec Corporation

At 01:00 AM 1/25/00 , you wrote:
>TAPR Spread Spectrum Special Interest Group Digest for Monday, January 24,
>2000.
>
>1. Transverter for the TAPR project
>2. Re: Group Purchase?
>
>--
>

>Subject: Transverter for the TAPR project
>From: "Hamoperator SM7UGT Marcel bos" <sm1ugt@hotmail.com>
>Date: Mon, 24 Jan 2000 05:36:31 PST
>X-Message-Number: 1
>
>
>Okey they say now that the TAPR Spreadspectrum Modem will have to wait until
>april. Now - while I wait I would like to ask for some pointers - if there
>is possible to construct a 900>430 Transverter for the TAPR project?
>
>
>
>____
>Get Your Private, Free Email at http://www.hotmail.com
>
>
>--
>
>Subject: Re: Group Purchase?
>From: Mike Dent <mike@dent.org>
>Date: Mon, 24 Jan 2000 15:40:11 +0000
>X-Message-Number: 2
>
>Jeff King wrote:
> >
> > Greg Jones wrote:
> >
> >
>[text deleted]
>
> > But what are our constraints on such a quest, Greg?
> >
> > There will be two distinct classes of wireless gear we will be seeking
> > out..... consumer stuff (like the Proxim Symphony) and more
> > pro gear like the BreezeCom equipment. I doubt we will get any
> > consideration at all on the Proxim consumer stuff but we may a
> > discount on the more professional stuff.
>
>Slightly off subject to the main thread....
>
>has anybody done any design of antennas for the 2.4Ghz ISM band?
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>dispersing the signal and altering its phase. The remote end of the link
>is well elevated.
>
>I changed these antenna to some stupidly expensive circular polarisation
>jobbies and this fixed the problem.
>
>Now I want to do some more "experimentation" but am looking for a simple
>design, dimensions etc, perhaps for a helix antenna with about 18dbi
>gain?
>
>Can anybody point me to anything similar?
>
>Thanks
>Mike
>
>
>[text deleted]
>
>--
>Mike Dent, Morecambe, Lancs. UK | <http://www.lancs.ac.uk/staff/dentm>
>email <mike@dent.org>, Amprnet <g6phf@gb7mbb.ampr.org>
>PGP fingerprint: 44 F5 22 C4 CB A2 3F 9F 73 9C 02 9F 0B 16 55 72
>
>
>
>---
>
>END OF DIGEST
>

>---
>You are currently subscribed to ss as: ROGER@C-SPEC.COM
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

Roger Boggs
C-SPEC Corporation
20 Marco Lane, Dayton OH 45458

PH: 937-439-2882
FAX: 937-439-2358
roger@overlan.com

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

56. [ss] Re: [amsat-bb] Inventor of FHSS dead

From: "Steve F. Russell" <sfr@iastate.edu>
Date: Tue, 25 Jan 2000 12:06:44 +0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-62551-2000.01.25-12.04.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for this info Colin. I appreciate you thinking of my work
when you saw it. It will come in handy in my book.

_____
Steve F. Russell, Ph.D., P.E.
Associate Professor
Electrical Engineering   Tel: 515-294-1273
3107 Coover ECPE   Fax: 515-294-3637
Iowa State University   sfr@iastate.edu
Ames, Iowa 50011
Personal Homepage: http://www.public.iastate.edu/~sfr/homepage.html
Wireless Network Security: http://wireless.ee.iastate.edu/
Pioneer Trail Research: http://www.public.iastate.edu/~sfr/TrailWeb/1trailweb.html
_____

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February 2000

Original source file: ss.0002
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0002

1. [ss] Re: [ss]Re: Group Purchase?

From: Mike Dent <mike@dent.org>
Date: Tue, 01 Feb 2000 23:15:22 +0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-63998-2000.02.01-17.13.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks Roger, I did enquire about these, however I was quoted $100
shipping for
two of these to the UK, almost as much as a pair of antenna.

Since I posted this message I have begun constructing a pair of helix
for testing.

Mike

Roger Boggs wrote:
> Mr. Dent:
> http://www.conifercorp.com
> The link above has some real nice 2.4GHz ISM band antennas that work very
> well and aren't prohibitively expensive. We sell them with our line of
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> >From: "Hamoperator SM7UGT Marcel bos" <sm1ugt@hotmail.com>
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> >
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> >_____
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> >
> >
> >----------
> >
> >Subject: Re: Group Purchase?
> >From: Mike Dent <mike@dent.org>
> >Date: Mon, 24 Jan 2000 15:40:11 +0000
> >X-Message-Number: 2
> >
> >Jeff King wrote:
> > >
> > > Greg Jones wrote:
> > >
> > >
> >[text deleted]
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> >gain?
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> >
> >Thanks
> >Mike
> >
> >
> >[text deleted]
> >
> >--
> >Mike Dent, Morecambe, Lancs. UK | <http://www.lancs.ac.uk/staff/dentm>
> >email <mike@dent.org>, Amprnet <g6phf@gb7mbb.ampr.org>
> >PGP fingerprint: 44 F5 22 C4 CB A2 3F 9F 73 9C 02 9F 0B 16 55 72
> >
> >
> >
> >---
> >
> >END OF DIGEST
> >
> >---
> >You are currently subscribed to ss as: ROGER@C-SPEC.COM
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
> Roger Boggs
> C-SPEC Corporation
> 20 Marco Lane, Dayton OH 45458
>
> PH: 937-439-2882
> FAX: 937-439-2358
> roger@overlan.com
>
> ---
> You are currently subscribed to ss as: MIKE@LURPAC.LANCS.AC.UK
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

--
Mike Dent, Morecambe, Lancs. UK | <http://www.lancs.ac.uk/staff/dentm>
email <mike@dent.org>, Amprnet <g6phf@gb7mbb.ampr.org>
PGP fingerprint: 44 F5 22 C4 CB A2 3F 9F 73 9C 02 9F 0B 16 55 72

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] Semiconductor Specific Search Engine.

From: members@semiseek.com
Date: Fri, 04 Feb 2000 01:37:07 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-64393-2000.02.04-00.29.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

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most popular Industry links to over 2500 Semiconductor related web sites.
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If you have received this email by mistake or would like to be removed from this list,
simply reply to this email with the word REMOVE in the subject line and Please accept our apologies.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: Semiconductor Specific Search Engine.

From: "Steve Miller" <miller@pasco.com>
Date: Fri, 4 Feb 2000 07:12:13 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-64440-2000.02.04-09.09.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am not interested in receiving any advertisements from semiseek
(or any other company for that matter) via TAPR's SS list. I thought
this was a 'spam free' zone.

smiller

On 4 Feb 00, at 1:37, members@semiseek.com wrote:

>
> Semiseek now has the latest Semiconductor News and New Product
> Announcements from the Manufacturers of Semiconductor Equipment. See the
> most popular Industry links to over 2500 Semiconductor related web sites.
> Search or navigate to find companies, vendors, technologies,
> services and more...
>
> Semiseek now offers Free Internet Based Email for Semiconductor Professionals.
> Visit Semiseek to sign up today! (Semiseek does not give out your e-mail address)
>
> The Most Powerful Resource for the Semiconductor Industry on the Internet!
>
> www.semiseek.com
>
> If you have received this email by mistake or would like to be removed from this list,
> simply reply to this email with the word REMOVE in the subject line and Please accept our apologies.
>
>
> ---
> You are currently subscribed to ss as: MILLER@PASCO.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Clearwire Technologies petition on SS Rulemaking

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Mon, 7 Feb 2000 03:46:34 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-64859-2000.02.07-05.52.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On October 25, 1999 Clearwire Technologies, Inc. (CT) filed a
petition for reconsideration and clarification on WT Docket No.
97-12, RM-8737 (this is the recently completed action by the
Commission to change the spread spectrum rules in the amateur radio
service). The Commission put this petition out for public comment on
January 14, 2000 and any opposition to this petition must be filed by
February 7, 2000, with any comments to those oppositions due ten days

later.

        In their petition, CT is asking for the following changes in Part 97:

Addition of paragraphs e-g in 97.311 as follows:

(e) Transmitters (including kits for constructing or modifying
transmitters) capable of operation at output powers in excess of one
watt in the bands specified in Section 15.247 must be certificated
pursuant to the procedures in subpart J of Part 2 of this chapter
prior to marketing.

(f) Transmitters capable of operating in the bands specified in
Section 15.247 must be able to transmit automatically at least 24
bytes of user-programmable data at the beginning and end of
communication and at least once every 10 minutes during a
communication. An operating transmitter must be programmed with the
station call sign and telephone number. Any information or
algorithms needed to detect and decode this data must be made
available on a publicly accessible website identified in the
certification application. Organizations of Amateur licensees are
encouraged, but not required, to collect this information on their
publicly accessible websites.

(g) The requirements of paragraphs (e) and (f) do not apply to a
transmitter constructed or modified by the licensee who operates it,
or constructed or modified by another amateur licensee in quantities
not to exceed one per year.

        TAPR is filing an opposition to this petition with the
Commission today. We have also put the petition up on the TAPR
website for your reference at:

                <ftp://ftp.tapr.org/ss/991025_Clearwire_pet.pdf>

We will post a copy of our response on the TAPR website after it is
filed at the Commission and we will post the URL for it on this list.

        For information on CT and their products and services, check
out their website at:

                <http://www.clearwire.com/index.html>

        We encourage you all to take a look at the CT petition and
file your own comments on the matter. It doesn't matter if they are
filed late, all that matters is that if you feel that you have
something to say on this issue that you do so. You can use our
filing as a model for your own.

-- Dewayne Hendricks, WA8DZP
Chairperson
TAPR Regulatory Affairs Committee

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] More on the Clearwire Matter

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Wed, 9 Feb 2000 07:58:49 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-65190-2000.02.09-09.56.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The ARRL filed comments on the Clearwire Technology, Inc.,
Petition for Reconsideration on FCC WT 97-12. You can find their
filing on their website at:

        <http://www.arrl.org/announce/regulatory/wt97-12/arrl-cmt.html>

We will have our comments up on the TAPR website soon and will post
the URL for it at that time.

-- Dewayne Hendricks, WA8DZP
Chairperson
TAPR Regulatory Affairs Committee

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] RV9J@VIRGILIO.IT (CCK SEARCH)

From: "PAOLO" <RV9J@VIRGILIO.IT>
Date: Sat, 12 Feb 2000 14:26:46
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-65651-2000.02.12-14.24.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'M LOOKING FOR HAVING MORE DOCU. TECH. ABOUT CCK(COMPLEMENTARY CODE
KEYING.
I APPRECIATE ANY KIND OF INFO THAT YOU WILL SEND ME.
PLEASE RETURN ME INTO MY OWN E-MAIL ADDRESS.
THKS.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] LEAGUE OPPOSES CLEARWIRE SPREAD SPECTRUM PETITION

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Sat, 12 Feb 2000 12:45:22 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-65655-2000.02.12-14.43.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

LEAGUE OPPOSES CLEARWIRE SPREAD SPECTRUM PETITION

The ARRL has asked the FCC to dismiss Clearwire Technologies' Petition for Reconsideration on the revised spread spectrum rules issued last summer. The FCC's August Report and Order relaxed rules governing the use of spread spectrum techniques by hams and opened the door to the possibility of international spread spectrum communication. Apparently fearing the possibility of amateur interference with its Part 15 products, however, Clearwire Technologies now wants the FCC to reconsider portions of its Report and Order.

The League called the Clearwire petition "frivolous" and asked the FCC to dismiss it and to affirm its Report and Order.

Clearwire is a Part 15 device manufacturer that provides high-speed wireless Internet and network access devices operating at 2.4 GHz, where there's an amateur allocation. It wants the FCC to require that amateur transmitters capable of operating in excess of 1 W on bands in which its Part 15 devices operate be FCC certificated prior to marketing. It also wants transmitters in those bands to automatically transmit an ID and telephone number and the spreading algorithms needed to detect and decode the data made available on a public Web site.

In opposing Clearwire's petition, the ARRL pointed out that the company is a latecomer to the proceeding that did not file comments or reply comments on the ARRL's 1995 Petition for Rule Making nor on the FCC's 1997 Notice of Proposed Rule Making that stemmed from the ARRL's petition. "Frankly, Clearwire is stating its position in this proceeding more than a bit late," the League said.

The League says none of Clearwire's requests is reasonable and suggests the company has no standing to propose "new, burdensome restrictions" on amateur operation. The ARRL said the restrictions on Amateur SS operation that Clearwire suggests are aimed at allowing Part 15 users "to monitor amateur operation in bands allocated to the Amateur Service, and presumably to object to any amateur SS operation" that might cause interference to its devices. The League pointed out, however, that FCC rules do not afford Part 15 devices any protections from interference from licensed services, such as Amateur Radio.

In its Report and Order last summer, the Commission dismissed assertions from manufacturers of Part 15 devices that the proposed changes could "upset the delicate balance" on bands where hams share spectrum with Part 15 users--especially in the 915 MHz and 2.4 GHz bands.

The FCC's Report and Order in WT Docket 97-12 adopted rules to allow Amateur Radio stations to transmit additional spread spectrum emission types, among other things. The new rules became effective last November 1.

A copy of the League's comments opposing the Clearwire petition for reconsideration is available at <http://www.arrl.org/announce/regulatory/wt97-12/arrl-cmt.html>. TAPR--Tucson Amateur Packet Radio--this week also filed in opposition to the Clearwire

petition. A copy of its petition is available via the TAPR Web site at
<ftp://ftp.tapr.org/ss/991025_Clearwire_pet.pdf>

Source: The ARRL Letter
Vol. 19, No. 6
February 11, 2000

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8. [ss] Re: RV9J@VIRGILIO.IT (CCK SEARCH)

From: "Scott C. Best" <sbest00@svpal.org>
Date: Mon, 14 Feb 2000 11:18:56 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: RV9J@VIRGILIO.IT
Message-ID: <LYR6751-65960-2000.02.14-13.16.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Paolo:

        In general, it is considered rude to ask a question
on a mailing list with the qualification that replies be
sent via direct email, and not to the whole group. Just
so you know.

        I believe that CCK'ing is the modulation basis behind
the 802.11b specification (the 11Mbps one). It was co-developed
by Harris and Lucent sometime early last year, and there should
still be info about it on their websites. Harris is now "Intersil",
but the PRISM chipset has the same name:
        www.intersil.com/prism/prism.asp

        You should be able to find what you need in their
datasheet and app-note section of their website.

        As an aside...anyone see the press release from Eagle
Wireless? www.eglw.com is their site. The press release speaks
of wireless 11Mbps capabilities for their set-top boxes. A
"wireless DSL capability" it's billed as. Neat. Now if only they
could install global infrastructure for less money than Iridium...

-Scott

On Sat, 12 Feb 2000, PAOLO wrote:

> I'M LOOKING FOR HAVING MORE DOCU. TECH. ABOUT CCK(COMPLEMENTARY CODE
> KEYING.
> I APPRECIATE ANY KIND OF INFO THAT YOU WILL SEND ME.
> PLEASE RETURN ME INTO MY OWN E-MAIL ADDRESS.
> THKS.
>
> ---
> You are currently subscribed to ss as: sbest00@svpal.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Information needed.

From: "Jose M. Valdes R." <yv5lix@cantv.net>
Date: Mon, 14 Feb 2000 17:39:48 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "YV5NXA" <yv5nxa@yv5lix.org>, "YV5MSG" <yv5msg@yv5lix.org>,
        "YV5CVF" <edyasia@cantv.net>, "YV5LVT" <yv5lvt@cantv.net>,
        "GAVV" <gavv@yv5lix.org>
Message-ID: <LYR6751-65989-2000.02.14-15.41.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi list members, I'm new to the list but I believe it could be a very
interesting one judging by the web site.

My question is:

Our group, GAVV (Grupo Alta Velocidad Venezuela), is working on a project to establish a high speed network and amateur radio Internet gateway using Spread Spectrum technology and a ADSL (1024 down/256 up) internet access provided by our local telephone company at my QTH. We would like to know were can we fiend information and prices on equipment suitable for our project and also if the TAPR equipments described in the Web Site can be purchase by us.

Any help on this matter is welcome.

Let's keep amateur radio alive.

73/DX from Jose M. Valdes R. YV5LIX
Six Club #864

yv5lix@yv5lix.org
JoseValdes@yv5lix.org

http://www.yv5lix.org

GRID32 Grid Calculator Win 95/98/2000 Free Download at
http://www.yv5lix.org/grid32/framegrid32.htm

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Radio

From: "ztn" <tienanzh@263.net>
Date: Sat, 19 Feb 2000 17:47:11 +0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-66640-2000.02.19-03.44.42--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear friends,

We are now designing a CDMA device, we have modem, we want to find a radio for it. The radio should be in UHF band, as our PN chiprate up to 8MHz, so it should be a wideband.

Who can help me on that?
Thanks in advance!

Zheng

□□□□y□□□□+.n□+□□□□□,j□□□□□□□□k□□□N□P□r□□z□u□□jy□ē□□^j□□□□□□S□X□□□j□□

11. [ss] Clearwire Technologies withdraws its petition for reconsideration

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Thu, 24 Feb 2000 07:12:03 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-67738-2000.02.24-09.10.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On February 17, 2000, Clearwire Technologies, Inc. withdrew the Petition for Reconsideration on WT 97-12, "Amendment of the Amateur Service Rules to Provide for Greater Use of Spread Spectrum Communications Technologies", which they filed on October 25, 1999. Comments in opposition to their petition were filed by the ARRL, Guy Story KC5GOI and TAPR.

TAPR would like to express its appreciation to both the League and Guy for taking the time to file comments on this matter. Copies of these filings will be posting in the Spread Spectrum section of the TAPR website soon.

-- Dewayne Hendricks WA8DZP
Chairperson
TAPR Regulatory Affairs Committee

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March 2000

Original source file: ss.0003
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0003

1. [ss] Ethernet Converter

From: "David's mail" <david.g_jones@cwcom.net>
Date: Fri, 3 Mar 2000 23:05:49 -0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69074-2000.03.03-17.22.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear All,

I'm not sure if this is the correct place to send this request, but somebody may be able to help me.

I am trying to do some experiments using high speed data (2Mbit/s) in the 2GHz (UK) amateur band, what I need is a converter to interface to this radio, it uses TTL levels for transmit data, transmit clock, receive data and receive clock, with the otherside of the converter connected to the ethernet network in my house (10Mbit/s on UTP).

I know there are commercial converters available at about £400:00 each, but my budget will not go that far, especially as I need two of them, one each end of the link.

Any circuit diagrams, help or other pointers will be gratefully received.

73, David, G6FEO.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] Re: Ethernet Converter

From: Derek Lassen <kn6td@clubnet.net>
Date: Fri, 03 Mar 2000 17:25:40 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69083-2000.03.03-19.31.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:05 PM 3/3/00 +0000, you wrote:
>Dear All,
>
>I'm not sure if this is the correct place to send this request, but somebody
>may be able to help me.
>
>I am trying to do some experiments using high speed data (2Mbit/s) in the
>2GHz (UK) amateur band, what I need is a converter to interface to this
>radio, it uses TTL levels for transmit data, transmit clock, receive data
>and receive clock, with the otherside of the converter connected to the
>ethernet network in my house (10Mbit/s on UTP).

On the one hand, converting from 10bT vs TTL is easy, you need a Jack (RJ45), magnetics (ie pulse transformer) and clocking circuits (PHY device).

However

The data and clock are at 10 Mhz on the 10bT and are at 2 Mhz on the modem.

So you need a buffer or processor between them.

For Buffers, look at IDT's offerings.

For Processors, Motorola's 68EN360 or AMD's Am186CC.

Follow up if this isn't enough.

Good Luck.

73 de KN6TD

>I know there are commercial converters available at about £400:00 each, but

>my budget will not go that far, especially as I need two of them, one each
>end of the link.
>
>Any circuit diagrams, help or other pointers will be gratefully received.
>
>73, David, G6FEO.
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: Ethernet Converter

From: "Lee W. Fry" <lfry@mindspring.com>
Date: Sat, 04 Mar 2000 07:00:36 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69153-2000.03.04-06.02.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:05 PM 3/3/00 -0000,David wrote:

>I am trying to do some experiments using high speed data (2Mbit/s) in the
>2GHz (UK) amateur band, what I need is a converter to interface to this
>radio, it uses TTL levels for transmit data, transmit clock, receive data
>and receive clock, with the otherside of the converter connected to the
>ethernet network in my house (10Mbit/s on UTP).
>
Sounds like a good job for a P100 box with a cheap ISA ethernet card and an
enhanced parallel port.

Lee
AA0JP

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: Ethernet Converter

From: "Elsy snc." <elsy@elsy.it>
Date: Sun, 05 Mar 2000 18:25:01 +0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69286-2000.03.05-11.26.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 00.00 05/03/00 -0600, you wrote:
>TAPR Spread Spectrum Special Interest Group Digest for Saturday, March 04,
2000.
>Subject: Re: Ethernet Converter

>>I am trying to do some experiments using high speed data (2Mbit/s) in the
>>2GHz (UK) amateur band, what I need is a converter to interface to this
>>radio, it uses TTL levels for transmit data, transmit clock, receive data
>>and receive clock, with the otherside of the converter connected to the
>>ethernet network in my house (10Mbit/s on UTP).
>>
>Sounds like a good job for a P100 box with a cheap ISA ethernet card and an
>enhanced parallel port.
>
>Lee
>AA0JP
>-->

Sorry... what is P100 box ?????

many thanks for info

Best Regards   Renato Bertello

Elsy Informatica snc.
Via Principi, 41
12042 BRA - Italy
Tel. +39 0333 2700071
fax. +39 0172 424255
http://www.elsy.it

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] Re: Ethernet Converter

From: "Allen Finne" <dallen@cei.net>
Date: Sun, 5 Mar 2000 14:55:53 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69307-2000.03.05-14.49.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

----- Original Message -----
From: "Elsy snc." <elsy@elsy.it>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Sunday, March 05, 2000 12:25 PM
Subject: [ss] Re: Ethernet Converter

> At 00.00 05/03/00 -0600, you wrote:
> >TAPR Spread Spectrum Special Interest Group Digest for Saturday, March
04,
> 2000.
> >Subject: Re: Ethernet Converter
>
> >>I am trying to do some experiments using high speed data (2Mbit/s) in
the
> >>2GHz (UK) amateur band, what I need is a converter to interface to this
> >>radio, it uses TTL levels for transmit data, transmit clock, receive
data
> >>and receive clock, with the otherside of the converter connected to the
> >>ethernet network in my house (10Mbit/s on UTP).
> >>
> >Sounds like a good job for a P100 box with a cheap ISA ethernet card and
an
> >enhanced parallel port.
> >
> >Lee
> >AA0JP
> >-->
>
>
> Sorry... what is P100 box ?????
>
> many thanks for info
>
>
>
> Best Regards Renato Bertello
>
>
> Elsy Informatica snc.
> Via Principi, 41
> 12042 BRA - Italy
> Tel. +39 0333 2700071
> fax. +39 0172 424255
> http://www.elsy.it
>
>
>
> ---
> You are currently subscribed to ss as: DALLEN@CEI.NET
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: Ethernet Converter

From: "Jose M. Valdes R. YV5LIX" <yv5lix@cantv.net>
Date: Sun, 5 Mar 2000 19:02:35 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69318-2000.03.05-17.00.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Lee, what is a P100 box? Where can I fiend some information about it?

I'm also trying to set up a high speed link for a Amateur Radio Internet
gateway using my ADSL Internet access and Ethernet cards.

Let's keep amateur radio alive

73/DX from Jose M. Valdes R. YV5LIX
yv5lix@yv5lix.org
yv5lix@cantv.net

http://www.yv5lix.org

-----Mensaje original-----
De: bounce-ss-14798@lists.tapr.org
[mailto:bounce-ss-14798@lists.tapr.org]En nombre de Lee W. Fry
Enviado el: Sábado, 04 de Marzo de 2000 08:01 YV5LIX
Para: TAPR Spread Spectrum Special Interest Group
Asunto: [ss] Re: Ethernet Converter

At 11:05 PM 3/3/00 -0000,David wrote:

>I am trying to do some experiments using high speed data (2Mbit/s) in the
>2GHz (UK) amateur band, what I need is a converter to interface to this
>radio, it uses TTL levels for transmit data, transmit clock, receive data
>and receive clock, with the otherside of the converter connected to the
>ethernet network in my house (10Mbit/s on UTP).
>
Sounds like a good job for a P100 box with a cheap ISA ethernet card and an
enhanced parallel port.

Lee
AA0JP

You are currently subscribed to ss as: yv5lix@yv5lix.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: Ethernet Converter

From: "Lee W. Fry" <lfry@mindspring.com>
Date: Sun, 05 Mar 2000 18:37:11 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69324-2000.03.05-17.38.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:02 PM 3/5/00 -0400, you wrote:
>Hi Lee, what is a P100 box? Where can I fiend some information about it?
>
>I'm also trying to set up a high speed link for a Amateur Radio Internet
>gateway using my ADSL Internet access and Ethernet cards.

Sorry, I didn't mean to confuse anyone with jargon. By P100 box, I meant a
Pentium 100 or similar PC from about four generations ago. You would want
one with an Enhanced Parallel Port which provides two way TTL communication.
A P100 with 16M af memory and a 500 - 800 MByte hard drive would run Linux
nicely which would get you all of the operating system you need to run IP
over Ethernet for data in and out to the radio. You would have to write
software to interface the parallel port to your radio.

I recently saw an add from a surplus place that had HP Vectra 133's with 32M
of memory, CD, 2.6GB of disk drive, Etherlink III network card, keyboard and
monitor for $US199. The price is typical of machines in this class. Such
machines are very easy to find, as they were once the desktop standard in
many large corporations that are now retiring anything slower than 200 MHz.

Lee
AA0JP

Lee W. Fry
lfry@mindspring.com

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8. [ss] Re: Ethernet Converter

From: "Daly, Brian" <brian.daly@attws.com>
Date: Mon, 6 Mar 2000 09:28:51 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69470-2000.03.06-11.27.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Pentium 100 computer I believe is what he is referring to..

Brian
WB7OML

> ----------
> From: Elsy snc.[SMTP:elsy@elsy.it]
> Reply To: TAPR Spread Spectrum Special Interest Group
> Sent: Sunday, March 05, 2000 10:25 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Ethernet Converter
>
> At 00.00 05/03/00 -0600, you wrote:
> >TAPR Spread Spectrum Special Interest Group Digest for Saturday, March
> 04,
> 2000.
> >Subject: Re: Ethernet Converter
>
> >>I am trying to do some experiments using high speed data (2Mbit/s) in
> the
> >>2GHz (UK) amateur band, what I need is a converter to interface to this
> >>radio, it uses TTL levels for transmit data, transmit clock, receive
> data
> >>and receive clock, with the otherside of the converter connected to the
> >>ethernet network in my house (10Mbit/s on UTP).
> >>
> >Sounds like a good job for a P100 box with a cheap ISA ethernet card and
> an
> >enhanced parallel port.
> >
> >Lee
> >AA0JP
> >-->
>
>
> Sorry... what is P100 box ?????
>
> many thanks for info
>
>
>
> Best Regards   Renato Bertello
>
>
> Elsy Informatica snc.
> Via Principi, 41
> 12042 BRA - Italy
> Tel. +39 0333 2700071
> fax. +39 0172 424255
> http://www.elsy.it
>
>
>
> ---
> You are currently subscribed to ss as: brian.daly@attws.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
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9. [ss] Re: Ethernet Converter

From: "Jose M. Valdes R. YV5LIX" <yv5lix@cantv.net>
Date: Mon, 6 Mar 2000 15:02:57 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>

Message-ID: <LYR6751-69493-2000.03.06-13.00.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for the information Lee.

Let's keep amateur radio alive

73/DX from Jose M. Valdes R. YV5LIX
yv5lix@yv5lix.org
yv5lix@cantv.net
FAX: 425-795-0655 (USA)

http://www.yv5lix.org

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10. [ss] Re: Ethernet Converter

From: Luis Yanes <melus@bart.us.es>
Date: Tue, 07 Mar 2000 16:23:46 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69720-2000.03.07-11.27.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

David's mail wrote:
>
> I am trying to do some experiments using high speed data (2Mbit/s) in the
> 2GHz (UK) amateur band, what I need is a converter to interface to this
> radio, it uses TTL levels for transmit data, transmit clock, receive data
> and receive clock, with the otherside of the converter connected to the
> ethernet network in my house (10Mbit/s on UTP).

There is a 10baseT (UTP) <-> AUI converter design in my pages, so you
only will need to translate the AUI levels to TTL if really needed, but
the 2Mbit/s <-> 10Mbit/s will need to buffer the data and some logic.
http://www.esi.us.es/~melus/gwlhw32.html
--
73's de Luis

mail: melus@bart.us.es
Ampr: eb7gwl.ampr.org
http://www.esi.us.es/~melus/   <- Homebrewed Hardware Projects with PCBs

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Spread Spectrum Scene Magazine

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Wed, 8 Mar 2000 06:33:48 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69877-2000.03.08-07.36.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,
I'm Dave (K0QE). I'm new to this list and want to get involved with SS
development asap. I'd really like to develop and/or build a FHSS radio/modem
and am trying to learn as much as I can right now. I found Spread Spectrum
Scene Magazine on the web (a great resource!) and noticed that it seems to
have been inactive since about the middle of 1998. Is this true? Are there
other good resources anybody can recommend for late breaking chip
information and projects? What other good resources are there besides the
TAPR website?

thanks!,

Dave
K0QE

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Wed, 08 Mar 2000 11:41:37 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69918-2000.03.08-11.36.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I happen to believe that wireless should go the way of the Internet:
Multipath peer-to-peer network of intelligent repeaters (routers). I like
the idea of variable power, decoupled send/recieve FHSS spreading stuff
proposed by Tim Shepard in 1996.

Has everyone read that stuff? It basically designs the near/far problem
into FHSS spreading codes as part of the protocol. It trades off latency
of multiple-hops for the ability to scale tranciever density per area. The
more dense the concentration of transcievers, the more aggregate
bandwidth. There should be Shepard PDF's on the TAPR web site. I forwarded
them months ago...

"Eric S. Johansson" wrote:

> I was reading an article about the Sprint/MCI merger and saw a
> statement by Bernard J. Ebbers claiming to provide open access for
> broadband wireless Internet services as well as accelerating access to
> rural areas.
>
> the article can be found at:
> http://www.internetnews.com/isp-news/article/0,1087,8_281551,00.html
>
> an interesting quote from the article:
>
> The Federal Communications Commission has made it a priority for the
> industry to find a way to span the "digital divide" and develop
> broadband access to under served communities. By committing the merged
> company to developing such a network, MCI-WorldCom is offering the
> federal regulators the means to exit from the open access debate by
> approving of the pending deal.
>
> --------
>
> I'm probably flogging a dead horse with this idea but I still think
> amateurs providing Internet access has some merit. Considering the
> FCC's goal and our public service charter, it seems like a natural
> match.
>
> --- eric
>
> Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
> This message was composed almost entirely using NaturallySpeaking
>
> ---
> You are currently subscribed to ss as: mcmillan@cboe.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: a potentially compelling application?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Wed, 8 Mar 2000 12:47:59 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-69920-2000.03.08-11.46.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

----- Original Message -----
From: "Jeremy McMillan" <mcmillan@cboe.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Wednesday, March 08, 2000 12:41 PM
Subject: [ss] Re: a potentially compelling application?

> I happen to believe that wireless should go the way of the Internet:
> Multipath peer-to-peer network of intelligent repeaters (routers). I like
> the idea of variable power, decoupled send/recieve FHSS spreading stuff
> proposed by Tim Shepard in 1996.
>
> Has everyone read that stuff? It basically designs the near/far problem
> into FHSS spreading codes as part of the protocol. It trades off latency
> of multiple-hops for the ability to scale tranciever density per area. The

> more dense the concentration of transcievers, the more aggregate
> bandwidth. There should be Shepard PDF's on the TAPR web site. I forwarded
> them months ago...

I looked briefly for it but no luck. would you please send a pointer to the
document to the list?
>
> "Eric S. Johansson" wrote:
>
> > I was reading an article about the Sprint/MCI merger and saw a
> > statement by Bernard J. Ebbers claiming to provide open access for
> > broadband wireless Internet services as well as accelerating access to
> > rural areas.
> >
> > the article can be found at:
> > http://www.internetnews.com/isp-news/article/0,1087,8_281551,00.html
> >
> > an interesting quote from the article:
> >
> > The Federal Communications Commission has made it a priority for the
> > industry to find a way to span the "digital divide" and develop
> > broadband access to under served communities. By committing the merged
> > company to developing such a network, MCI-WorldCom is offering the
> > federal regulators the means to exit from the open access debate by
> > approving of the pending deal.
> >
> > --------
> >
> > I'm probably flogging a dead horse with this idea but I still think
> > amateurs providing Internet access has some merit. Considering the
> > FCC's goal and our public service charter, it seems like a natural
> > match.
> >
> > --- eric
> >
> > Eric S. Johansson   esj@inguide.com   esj@harvee.billerica.ma.us
> > This message was composed almost entirely using NaturallySpeaking
> >
> > ---
> > You are currently subscribed to ss as: mcmillan@cboe.com
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
> ---
> You are currently subscribed to ss as: esj@harvee.billerica.ma.us
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Pseudo Noise

From: Sigit <sigit94@student.te.ugm.ac.id>
Date: Thu, 9 Mar 2000 14:04:41 +0700 (JVT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70050-2000.03.09-00.38.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear All,

I am a new member of this maling list.
I am a student at Gadjah Mada University Indonesia.
Right now, I am doing my thesis about spread spectrum using
direct sequence. I will build the hardware, but this hardware
is limited without radio frequency. Therefore I will only
build the hardware that could show spread spectrum scheme using
direct sequence.
I still don't know how to synchronize and track in the reciever.

Anybody help me ?

Thank You very much.
SIGIT

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] RE: Pseudo Noise

From: "Rochford, Richard E (Dick)" <rerochford@lucent.com>
Date: Thu, 9 Mar 2000 08:51:59 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70078-2000.03.09-07.51.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

SIGIT,

Andre Kesterloot published several articles about direct sequence systems to include the challenge of synchronization. In fact I referenced much of his work in my practicum back in 91'. A bibliography which includes some of his work can be found at the ARRL Web Site
http://www.arrl.org/tis/bibs/spread.html
<http://www.arrl.org/tis/bibs/spread.html> .

Richard E. Rochford

> -----Original Message-----
> From: Sigit [mailto:sigit94@student.te.ugm.ac.id]
> Sent: Thursday, March 09, 2000 2:05 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Pseudo Noise
>
> Dear All,
>
> I am a new member of this maling list.
> I am a student at Gadjah Mada University Indonesia.
> Right now, I am doing my thesis about spread spectrum using direct sequence. I will build the hardware, but this hardware
> is limited without radio frequency. Therefore I will only build the hardware that could show spread spectrum scheme using
> direct sequence.
> I still don't know how to synchronize and track in the reciever.
>
> Anybody help me ?
>
> Thank You very much.
> SIGIT
>
> ---
> You are currently subscribed to ss as: R.E.ROCHFORD@LUCENT.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] RE: Pseudo Noise

From: Lim_Nguyen/CET/UNO/UNEBR@unomail.unomaha.edu
Date: Thu, 9 Mar 2000 08:35:23 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70081-2000.03.09-08.41.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello everyone:

I have a somewhat related question: is there any rule regarding SS transmission that does not employ pseudo-noise codes, either for direct sequence or frequency hopping (or any SS modulation schemes such as time hopping, etc.). Our understanding is that the new ruling removes the old restriction on PN codes. Does this mean that it is OK to use, say, spreading codes that are truly random and time varying?

Thanks, - Lim

"Rochford, Richard E (Dick)" <rerochford@lucent.com> on 03/09/2000 07:51:59 AM

Please respond to "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>

To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>

cc: (bcc: Lim Nguyen/CET/UNO/UNEBR)

Subject [ss] RE: Pseudo Noise
:

SIGIT,

Andre Kesterloot published several articles about direct sequence systems to include the challenge of synchronization. In fact I referenced much of his work in my practicum back in 91'. A bibliography which includes some of his work can be found at the ARRL Web Site
http://www.arrl.org/tis/bibs/spread.html
<http://www.arrl.org/tis/bibs/spread.html> .

Richard E. Rochford

-----Original Message-----
From: Sigit [mailto:sigit94@student.te.ugm.ac.id]
Sent: Thursday, March 09, 2000 2:05 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Pseudo Noise

Dear All,

I am a new member of this maling list.
I am a student at Gadjah Mada University Indonesia.
Right now, I am doing my thesis about spread spectrum using direct sequence. I will build the hardware, but this hardware is limited without radio frequency. Therefore I will only build the hardware that could show spread spectrum scheme using direct sequence.
I still don't know how to synchronize and track in the reciever.

Anybody help me ?

Thank You very much.
SIGIT

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17. [ss] Cordless Phone FHSS 900 MHz

From: k2pat@webtv.net (Pat Howard)
Date: Sat, 11 Mar 2000 15:36:18 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70498-2000.03.11-14.35.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The AT&T Model 9515 is/was available from Egghead.com for about $69 +
$12 s&h. It's 900 MHz FHSS, presumably less than 1 Watt, and really
goes the 4000 feet it claims.

I hope to add some gain antennas, put it on the towers and use it for a
repeater link about 6 miles apart. From what I read in the FCC R&O of
November 1999, I just have to add an ID in the audio chain and it's a
bidirectional link. It has 2-way page and intercom functions that I may
have to key up or mute as needed, but I think I have a low cost entry to
the SS world.

What say you? (If "appliance user" is an insult in your vocabulary,
please just keep it to yourself and don't clog the SIG with it.)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: Cordless Phone FHSS 900 MHz

From: Jeff King <jeff@aerodata.net>
Date: Sat, 11 Mar 2000 16:10:59 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70502-2000.03.11-15.08.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Did you open it up yet? Would be interesting to hear what it has inside of it,
chip sets and such.

Under what conditions were you able to get 4000 feet out of it? True line
of sight or from the base (inside your home) to you walking around about
a mile away (not line of sight)?

If the later, getting 6 miles range out of it will be a piece of cake
with gain antennas and line of sight.

The only problem I can think of, in your application, is you'll need to trick
it into thinking your on a real phone line. Trace the logic levels on the telephone
interface part of it (ring, off hook, dial tone detected etc.) and you could then
trick it out so it would come up as a full time link. Maybe a PIC to do this.

The scary thing about this is I bet its nearly as good as a FreeWave unit,
(in some ways more complicated) but here we are talking $69 vs. $700
for a FreeWave OEM board. It looks to me as if the freewave board
has less then $100 of parts on it (which is consistent with their 10,000 piece
pricing at $200 each).

BTW, the antenna I like the best for point to point links is the Directive
Systems 18 element loop Yagi. This same antenna is sold by Down East
Microwave. For a omni, Comet makes a 900mhz vertical that they claim
has 11dbi gain. Its 7 feet tall, so you know something is going on inside
it. I've had good luck with it, and it seemed to have the same performance
level as a corner reflector from Old Antenna lab, which supposedly had
about 10dbi gain.

-Jeff

Pat Howard wrote:

> The AT&T Model 9515 is/was available from Egghead.com for about $69 +
> $12 s&h. It's 900 MHz FHSS, presumably less than 1 Watt, and really
> goes the 4000 feet it claims.
>
> I hope to add some gain antennas, put it on the towers and use it for a
> repeater link about 6 miles apart. From what I read in the FCC R&O of
> November 1999, I just have to add an ID in the audio chain and it's a
> bidirectional link. It has 2-way page and intercom functions that I may
> have to key up or mute as needed, but I think I have a low cost entry to
> the SS world.
>
> What say you? (If "appliance user" is an insult in your vocabulary,
> please just keep it to yourself and don't clog the SIG with it.)
>
> ---

> You are currently subscribed to ss as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

19. [ss] RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?

From: "Darryl Smith" <darryl@radio-active.net.au>
Date: Sun, 12 Mar 2000 17:39:39 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70600-2000.03.12-00.33.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day...

These phones are not quite so cheap down here in Oz, and besides they can only use 1/2 the 900 Mhz band as we have GSM phones in the rest... But I digress..

I guess from what has been written is that these phones are 1/2 duplex. This is reasonable since they are 900 not 900/2400 models. Also I would guess they are not attempting to transmit and receive at the same time... Mobiles need a big frequency seperation to do this... Therefore I would gress that both ends operate in the same band...

Assuming a base station(A) and a mobile(B)... over time I would guess the transmission pattern would be

```
A B A B A B A B A B A B A B
AAA BBB AAA BBB AAA BBB AAA BBB
```

That is the base transmits packets and then some way the mobile is told to transmit packets. Since these phones are mobile I am going to make another assumption... The timing is based on time, not a command which says you can transmit now... If it was and this got corrupted the system would fail...

Ok.. Now some assumptions... From the TAPR SS radio we have a slot time where the radio is transmitting of 10 MSec. Well not quite transmitting... We have a TxRx or RxTx time of 1 mSec. Then I am assuming that 1/2 this 10 mSec is being used for data so that the other 1/2 can be used for transmission delay... During this 5 MSec we would be transmitting 20 Msec of Digitised Voice (Well, if Qualcomm digitizes 20 mSec of voice in their phones then I may as well use this figure).

Now, The base station transmits 5 mSec of data to the mobile at the beginning of it's slot... It takes some time to get there... Once it gets there it listens. Once it has finished listening when the base has finished transmitting, it then transmits... What does this mean...

If the base station takes longer than about 5 mSec in propergation then the mobile will be transmitting and not receiving. OK, so why won't the timing just adjust itself a but further.... It will but there is a hard limit....

Now looking at the phone itself... 4000 feet... Lets convert that into real units.... about 1219.2 meters. But how long is 1219.2 meters? Well, light travels about 300 Meters in 1 mSec, therefore it is about 4.064 MSec in the transmission path...

Looking back at my calculations I noted that 5 mSec was about my guess of the limit on propergation. This comes to 1500 Meters or 4921 feet. Oops. I forgot the tx/rx time... That makes it almost exactly 4000 feet.

So unfortunately unless this product is well engineered to allow longer distances I would guess that it is actually limited to the 4000 feet deep in firmware... Doing that makes it easier to reduce interference caused by people adding a linear :-)

darryl

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
EMAIL: Darryl@radio-active.net.au [www.radio-active.net.au coming soon]

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?

From: Doug Bade <doug@ohioaprs.net>
Date: Sun, 12 Mar 2000 14:26:17 +0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70624-2000.03.12-08.22.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

my recollection on rf propagation velocity is more like 1 microsecond per 1000 ft.... actually .186 miles in 1usec.. , I just checked my radar endorsement docs.. I beleive light and RF both propagate at this speed. doug

At 05:39 PM 3/12/00 +1100, you wrote:
>G'Day...
>
>These phones are not quite so cheap down here in Oz, and besides they can
>only use 1/2 the 900 Mhz band as we have GSM phones in the rest... But I
>digress..
>
>I guess from what has been written is that these phones are 1/2 duplex. This
>is reasonable since they are 900 not 900/2400 models. Also I would guess
>they are not attempting to transmit and receive at the same time... Mobiles
>need a big frequency seperation to do this... Therefore I would gress that
>both ends operate in the same band...
>
>Assuming a base station(A) and a mobile(B)... over time I would guess the
>transmission pattern would be
>   A B A B A B A B A B A B A B
>   AAA BBB AAA BBB AAA BBB AAA BBB
>
>That is the base transmits packets and then some way the mobile is told to
>transmit packets. Since these phones are mobile I am going to make another
>assumption... The timing is based on time, not a command which says you can
>transmit now... If it was and this got corrupted the system would fail...
>
>Ok.. Now some assumptions... From the TAPR SS radio we have a slot time
>where the radio is transmitting of 10 MSec. Well not quite transmitting...
>We have a TxRx or RxTx time of 1 mSec. Then I am assuming that 1/2 this 10
>mSec is being used for data so that the other 1/2 can be used for
>transmission delay... During this 5 MSec we would be transmitting 20 Msec of
>Digitised Voice (Well, if Qualcomm digitizes 20 mSec of voice in their
>phones then I may as well use this figure).
>
>Now, The base station transmits 5 mSec of data to the mobile at the
>beginning of it's slot... It takes some time to get there... Once it gets
>there it listens. Once it has finished listening when the base has finished
>transmitting, it then transmits... What does this mean...
>
>If the base station takes longer than about 5 mSec in propergation then the
>mobile will be transmitting and not receiving. OK, so why won't the timing
>just adjust itself a but further.... It will but there is a hard limit....
>
>Now looking at the phone itself... 4000 feet... Lets convert that into real
>units.... about 1219.2 meters. But how long is 1219.2 meters? Well, light
>travels about 300 Meters in 1 mSec, therefore it is about 4.064 MSec in the
>transmission path...
>
>Looking back at my calculations I noted that 5 mSec was about my guess of
>the limit on propergation. This comes to 1500 Meters or 4921 feet. Oops. I
>forgot the tx/rx time... That makes it almost exactly 4000 feet.
>
>So unfortunately unless this product is well engineered to allow longer
>distances I would guess that it is actually limited to the 4000 feet deep in
>firmware... Doing that makes it easier to reduce interference caused by
>people adding a linear :-)
>
>darryl
>---------
>Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
>Mobile Number 0412 929 634 [+61 4 12 929 634 International]
>EMAIL: Darryl@radio-active.net.au [www.radio-active.net.au coming soon]
>
>
>
>---
>You are currently subscribed to ss as: DOUG@CLECOM.COM
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?

From: "Darryl Smith" <darryl@radio-active.net.au>
Date: Mon, 13 Mar 2000 17:32:02 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70739-2000.03.13-00.26.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day...

OK - I stand corrected.... I got mixed up between uSec and mSec...

However there is a hard limit to the calling... This is why GSM has a limit
of 35 miles (or 70 miles for special base stations). Anyway with the figures
I used I guess the limit would be 1500 Km... I suppose that you would
experience power problems before this limit...

Darryl

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
EMAIL: Darryl@radio-active.net.au [www.radio-active.net.au coming soon]

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] Re: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Mon, 13 Mar 2000 09:08:17 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70773-2000.03.13-08.07.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

<snip>
>I hope to add some gain antennas, put it on the towers and use it for a
>repeater link about 6 miles apart. From what I read in the FCC R&O of
>November 1999, I just have to add an ID in the audio chain and it's a
>bidirectional link. It has 2-way page and intercom functions that I may
>have to key up or mute as needed, but I think I have a low cost entry to
>the SS world.
>
>What say you? (If "appliance user" is an insult in your vocabulary,
>please just keep it to yourself and don't clog the SIG with it.)

Nothing wrong with using an "appliance for somethin it wasn't intended for.
 I use a modified SS phone to access my vhf/uhf remote base.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] RE: Cordless Phone FHSS 900 MHz

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Mon, 13 Mar 2000 09:18:47 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70795-2000.03.13-10.21.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Could one of these units be for remote control of a ham radio station? I've
got a station located about 12 miles line of sight from my home. I'd like to
be able to achieve HF rig control as well as transmit and receive SSB from
the remote site. How would this be achieved? Kachina uses Freewave modems
for this which cost about $1500/ea. A bit out of my price range.

--Dave

        From: k2pat@webtv.net [SMTP:k2pat@webtv.net]
        Sent: Saturday, March 11, 2000 1:36 PM
        To: TAPR Spread Spectrum Special Interest Group
        Subject: [ss] Cordless Phone FHSS 900 MHz

        The AT&T Model 9515 is/was available from Egghead.com for about $69
+
        $12 s&h. It's 900 MHz FHSS, presumably less than 1 Watt, and really
        goes the 4000 feet it claims.

        I hope to add some gain antennas, put it on the towers and use it
for a
        repeater link about 6 miles apart. From what I read in the FCC R&O
of
        November 1999, I just have to add an ID in the audio chain and it's
a
        bidirectional link. It has 2-way page and intercom functions that I
may
        have to key up or mute as needed, but I think I have a low cost
entry to
        the SS world.

        What say you? (If "appliance user" is an insult in your vocabulary,
        please just keep it to yourself and don't clog the SIG with it.)

        You are currently subscribed to ss as: daved@ctilidar.com
        To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Mon, 13 Mar 2000 12:40:54 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70809-2000.03.13-11.40.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:18 AM 3/13/00 -0700, you wrote:
>Could one of these units be for remote control of a ham radio station? I've
>got a station located about 12 miles line of sight from my home. I'd like to
>be able to achieve HF rig control as well as transmit and receive SSB from
>the remote site. How would this be achieved?<snip>

I emulated a phone line for the cordless phone base. I used a couple of
op-amps to make a 2-wire to 4-wire converter (really a 1-wire plus ground
to 2-wire plus ground) and simulated the phone line current with a large
inductor and a current limiting resistor. I detected the base "off hook"
with an opto. Ham rig keying is achieved with a 1024Hz tone osc. in the
handset that is enabled with a "ptt" switch that I put in place of the
headphone jack that was conviently located where my thumb went. A 1024Hz
tone decoder in the base logic keyed the ham rig. The tone was notched out
of the audio with an active notch filter to keep it from being heard. A
touch tone decoder and a home-brew micro took care of ID, timing and freq.
control of the ham rig. DTMF for control also had to have a 256Hz tone
(512Hz/1024Hz selected with a slide switch that used to be a ringer switch)
so Touch Tones sent thru the remote base didn't cause unexpected control
functions.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day

516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] RE: Cordless Phone FHSS 900 MHz

From: Jeff King <jeff@aerodata.net>
Date: Mon, 13 Mar 2000 13:23:26 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70815-2000.03.13-12.21.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dave D'Epagnier wrote:

> Kachina uses Freewave modems
> for this which cost about $1500/ea. A bit out of my price range.

No, Kachina is CHARGING you $1500/ea for Freewave modems. You can
get the FreeWave boards for $700each in qty 1. This is a FreeWave modem
without the plastic case.

Still not cheap, but half the price of what Kachina is trying to charge you.

-Jeff

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] interesting paper

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Mon, 13 Mar 2000 13:30:48 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70816-2000.03.13-12.29.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.media.mit.edu/~r/academics/PhD/ProSem.html

Introduction

Moore's Law has kept its promise: digital computing systems are plentiful,
capable, and cheap. Memory and storage systems have followed a similar
curve. In 1997, you can purchase over a gigabyte of disk storage for less
than two hours of consulting fees.

But digital networks, the nervous system that connects computer systems
together, haven't kept pace. Wired networks are unsuitable for mobile
devices, cable and connector costs render them impractical for
interconnecting hundreds or thousands of devices. A high cost per node
inhibits pervative deployment of wireless networks. And even if the cost
issue were solved, current wireless network architectures become congested
when faced with hundreds or thousands of nodes in one area.

Before ubiquitous computing as envisioned by Mark Weiser ([Weis91]) can
become reality, the challenges of ubiquitous networking must first be
addressed. But today's computer networks are too expensive, too
power-hungry, and to coarse grained to attain ubiquity&emdash;a new network
architecture is needed.

My thesis will present a novel model for networking appropriate for the task
of interconnecting hundreds or thousands of everyday objects. The network
will be characterized as wireless, low-cost, low-power, and self-organizing.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: a potentially compelling application?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Mon, 13 Mar 2000 13:40:23 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70820-2000.03.13-12.40.10--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

----- Original Message -----
From: "Jeremy McMillan" <mcmillan@cboe.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Wednesday, March 08, 2000 12:41 PM
Subject: [ss] Re: a potentially compelling application?

> I happen to believe that wireless should go the way of the Internet:
> Multipath peer-to-peer network of intelligent repeaters (routers). I like
> the idea of variable power, decoupled send/recieve FHSS spreading stuff
> proposed by Tim Shepard in 1996.
>
> Has everyone read that stuff? It basically designs the near/far problem
> into FHSS spreading codes as part of the protocol. It trades off latency
> of multiple-hops for the ability to scale tranciever density per area. The
> more dense the concentration of transcievers, the more aggregate
> bandwidth. There should be Shepard PDF's on the TAPR web site. I forwarded
> them months ago...

found it...

Tim Shepard, KD1KY. Tim's MIT PhD thesis, Decentralized Channel Management in Scalable Multihop Spread-Spectrum Packet Radio Networks, is an excellent work. Tim found that there is essentially no limit to how large and dense a packet radio network can be as long as it uses spread spectrum, transmitter power control and minimum-energy routing.

ftp://ftp.lcs.mit.edu/pub/lcs-pubs/tr.outbox/MIT-LCS-TR-670.ps.gz

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] Re: Cordless Phone FHSS 900 MHz

From: N8xlr@aol.com
Date: Mon, 13 Mar 2000 18:45:51 EST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70862-2000.03.13-17.45.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi I wonder if the schematic would be available from Howard Sams ? I'll try to find out. I am in the process of retiring and will save your comm on hard copy and get back to you. Thanks for the info N8xlr . The handle is Lew Kuhn in Ohio tks,73

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: ss digest: March 12, 2000

From: "Patrick Van Torre" <pvantorre@freegates.be>
Date: Tue, 14 Mar 2000 01:01:30 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70871-2000.03.13-18.25.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ter info; ge ziet dat er toch nog krakken rondlopen die over 't een en 't ander
eens verder denken....
By the way, sorry dat ik het laatst weer eens vergeten was op 70cm; om het goed te maken zal ik u 10 potten met vliegen en propellors prepareren :-)
Hoe was 't voor de rest met de contest?

Groeten

Pat

> Van: TAPR Spread Spectrum Special Interest Group digest
<ss@lists.tapr.org>
> Aan: ss digest recipients <ss@lists.tapr.org>
> Onderwerp: ss digest: March 12, 2000
> Datum: maandag 13 maart 2000 7:02

>
> TAPR Spread Spectrum Special Interest Group Digest for Sunday, March 12,
2000.
>
> 1. RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?
> 2. RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?
>
> --
>
> Subject: RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?
> From: "Darryl Smith" <darryl@radio-active.net.au>
> Date: Sun, 12 Mar 2000 17:39:39 +1100
> X-Message-Number: 1
>
> G'Day...
>
> These phones are not quite so cheap down here in Oz, and besides they can
> only use 1/2 the 900 Mhz band as we have GSM phones in the rest... But I
> digress..
>
> I guess from what has been written is that these phones are 1/2 duplex.
This
> is reasonable since they are 900 not 900/2400 models. Also I would guess
> they are not attempting to transmit and receive at the same time...
Mobiles
> need a big frequency seperation to do this... Therefore I would gress
that
> both ends operate in the same band...
>
> Assuming a base station(A) and a mobile(B)... over time I would guess the
> transmission pattern would be
>   A B A B A B A B A B A B A B
>   AAA BBB AAA BBB AAA BBB AAA BBB
>
> That is the base transmits packets and then some way the mobile is told
to
> transmit packets. Since these phones are mobile I am going to make
another
> assumption... The timing is based on time, not a command which says you
can
> transmit now... If it was and this got corrupted the system would fail...
>
> Ok.. Now some assumptions... From the TAPR SS radio we have a slot time
> where the radio is transmitting of 10 MSec. Well not quite
transmitting...
> We have a TxRx or RxTx time of 1 mSec. Then I am assuming that 1/2 this
10
> mSec is being used for data so that the other 1/2 can be used for
> transmission delay... During this 5 MSec we would be transmitting 20 Msec
of
> Digitised Voice (Well, if Qualcomm digitizes 20 mSec of voice in their
> phones then I may as well use this figure).
>
> Now, The base station transmits 5 mSec of data to the mobile at the
> beginning of it's slot... It takes some time to get there... Once it gets
> there it listens. Once it has finished listening when the base has
finished
> transmitting, it then transmits... What does this mean...
>
> If the base station takes longer than about 5 mSec in propergation then
the
> mobile will be transmitting and not receiving. OK, so why won't the
timing
> just adjust itself a but further.... It will but there is a hard
limit....
>
> Now looking at the phone itself... 4000 feet... Lets convert that into
real
> units.... about 1219.2 meters. But how long is 1219.2 meters? Well, light
> travels about 300 Meters in 1 mSec, therefore it is about 4.064 MSec in
the
> transmission path...
>
> Looking back at my calculations I noted that 5 mSec was about my guess of
> the limit on propergation. This comes to 1500 Meters or 4921 feet. Oops.
I
> forgot the tx/rx time... That makes it almost exactly 4000 feet.
>
> So unfortunately unless this product is well engineered to allow longer

> distances I would guess that it is actually limited to the 4000 feet deep
in
> firmware... Doing that makes it easier to reduce interference caused by
> people adding a linear :-)
>
> darryl
> ---------
> Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> EMAIL: Darryl@radio-active.net.au [www.radio-active.net.au coming soon]
>
>
>
> --
>
> Subject: RE: Cordless Phone FHSS 900 MHz - A Hard distance Limit?
> From: Doug Bade <doug@ohioaprs.net>
> Date: Sun, 12 Mar 2000 14:26:17 +0000
> X-Message-Number: 2
>
> my recollection on rf propagation velocity is more like 1 microsecond per
> 1000 ft.... actually .186 miles in 1usec.. , I just checked my radar
> endorsement docs.. I beleive light and RF both propagate at this speed.
doug
>
> At 05:39 PM 3/12/00 +1100, you wrote:
> >G'Day...
> >
> >These phones are not quite so cheap down here in Oz, and besides they
can
> >only use 1/2 the 900 Mhz band as we have GSM phones in the rest... But I
> >digress..
> >
> >I guess from what has been written is that these phones are 1/2 duplex.
This
> >is reasonable since they are 900 not 900/2400 models. Also I would guess
> >they are not attempting to transmit and receive at the same time...
Mobiles
> >need a big frequency seperation to do this... Therefore I would gress
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> >both ends operate in the same band...
> >
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the
> >transmission pattern would be
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> >   AAA BBB AAA BBB AAA BBB AAA BBB
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> >transmit packets. Since these phones are mobile I am going to make
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> >assumption... The timing is based on time, not a command which says you
can
> >transmit now... If it was and this got corrupted the system would
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> >
> >Ok.. Now some assumptions... From the TAPR SS radio we have a slot time
> >where the radio is transmitting of 10 MSec. Well not quite
transmitting...
> >We have a TxRx or RxTx time of 1 mSec. Then I am assuming that 1/2 this
10
> >mSec is being used for data so that the other 1/2 can be used for
> >transmission delay... During this 5 MSec we would be transmitting 20
Msec of
> >Digitised Voice (Well, if Qualcomm digitizes 20 mSec of voice in their
> >phones then I may as well use this figure).
> >
> >Now, The base station transmits 5 mSec of data to the mobile at the
> >beginning of it's slot... It takes some time to get there... Once it
gets
> >there it listens. Once it has finished listening when the base has
finished
> >transmitting, it then transmits... What does this mean...
> >
> >If the base station takes longer than about 5 mSec in propergation then
the
> >mobile will be transmitting and not receiving. OK, so why won't the
timing

> >just adjust itself a but further.... It will but there is a hard
limit....
> >
> >Now looking at the phone itself... 4000 feet... Lets convert that into
real
> >units.... about 1219.2 meters. But how long is 1219.2 meters? Well,
light
> >travels about 300 Meters in 1 mSec, therefore it is about 4.064 MSec in
the
> >transmission path...
> >
> >Looking back at my calculations I noted that 5 mSec was about my guess
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> >the limit on propergation. This comes to 1500 Meters or 4921 feet. Oops.
I
> >forgot the tx/rx time... That makes it almost exactly 4000 feet.
> >
> >So unfortunately unless this product is well engineered to allow longer
> >distances I would guess that it is actually limited to the 4000 feet
deep in
> >firmware... Doing that makes it easier to reduce interference caused by
> >people adding a linear :-)
> >
> >darryl
> >---------
> >Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
> >Mobile Number 0412 929 634 [+61 4 12 929 634 International]
> >EMAIL: Darryl@radio-active.net.au [www.radio-active.net.au coming soon]
> >
> >
> >
> >---
> >You are currently subscribed to ss as: DOUG@CLECOM.COM
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: pvantorre@freegates.be
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

30. [ss] CORDLESS PHONE FHSS

From: k2pat@webtv.net (Pat Howard)
Date: Tue, 14 Mar 2000 07:57:15 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70954-2000.03.14-06.56.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm glad the speed of light has just been corrected so that the hard
limit goes away. However, the half duplex theory sounds correct so
there may still be a limit imposed by timing limitations. I haven't
modified the unit yet, so I don't know if I'll get the 6 miles until I
add gain antennas or find an appropriately high spot to test from.

I replied earlier to one of the posts, but not to the group, that this
phone has 2-way page and intercom. I won't have to simulate a phone
line, but just push the page/intercom button and acknowledge the
intercom light with a similar push. This protocol is simple enough to
do with discreet parts.   It also has a backup battery so it should not
have power problems in long term uses.

Although the speed of light is the same in Oz (only the direction of
rotation changes during the flush), the FCC Spread Spectrum rules don't
apply. Conflicting with GSM can be a real problem and I would suspect
that you can't buy a 900 MHz cordless phone there.

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

31. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 08:54:23 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70968-2000.03.14-07.53.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>X-PH: V4.4@bnl.gov
>From: "Hunter, Bob" <Bob_Hunter@ATK.COM>
>To: "'rjs@bnl.gov'" <rjs@bnl.gov>
>Subject: RE: [ss] RE: Cordless Phone FHSS 900 MHz
>Date: Mon, 13 Mar 2000 12:36:55 -0600
>X-Mailer: Internet Mail Service (5.5.2650.21)
>
>Ron,
>Do you have a schematic of your "Telephone Line Simulator" that you could
>post?
>Thanks,
>Bob aa0fg
>
>Robert S. Hunter PE
>Senior Principal Development Engineer
>Alliant Techsystems Inc.
>Telephone: 612.931.7619
>Facsimile: 612.931.6512
>
>> ----------
>> From: Ron Schroeder[SMTP:rjs@bnl.gov]
>> Reply To: TAPR Spread Spectrum Special Interest Group
>> Sent: Monday, March 13, 2000 11:40 AM
>> To: TAPR Spread Spectrum Special Interest Group
>> Subject: [ss] RE: Cordless Phone FHSS 900 MHz
>>
>> At 09:18 AM 3/13/00 -0700, you wrote:
>> >Could one of these units be for remote control of a ham radio station?
>> I've
>> >got a station located about 12 miles line of sight from my home. I'd like
>> to
>> >be able to achieve HF rig control as well as transmit and receive SSB
>> from
>> >the remote site. How would this be achieved?<snip>
>>
>> I emulated a phone line for the cordless phone base. I used a couple of
>> op-amps to make a 2-wire to 4-wire converter (really a 1-wire plus ground
>> to 2-wire plus ground) and simulated the phone line current with a large
>> inductor and a current limiting resistor. I detected the base "off hook"
>> with an opto. Ham rig keying is achieved with a 1024Hz tone osc. in the
>> handset that is enabled with a "ptt" switch that I put in place of the
>> headphone jack that was conviently located where my thumb went. A 1024Hz
>> tone decoder in the base logic keyed the ham rig. The tone was notched
>> out
>> of the audio with an active notch filter to keep it from being heard. A
>> touch tone decoder and a home-brew micro took care of ID, timing and freq.
>> control of the ham rig. DTMF for control also had to have a 256Hz tone
>> (512Hz/1024Hz selected with a slide switch that used to be a ringer
>> switch)
>> so Touch Tones sent thru the remote base didn't cause unexpected control
>> functions.
>> --
>> --
>> --------
>> Ron Schroeder
>> WD8CDH
>> E. E. S.
>> wd8cdh@bnl.gov
>> rjs@bnl.gov
>> ron@112motors.com
>> 516 344-4561 Day
>> 516 286-5677 Nite
>> after April 1st. use area code 631
>>
>> ---
>> You are currently subscribed to ss as: BOB_HUNTER@ATK.COM
>> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>>
>

Ron Schroeder
Brookhaven National Lab
Building 911A
Upton NY 11793

rjs@bnl.gov
516 344-4561
after April 1st use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

32. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 08:55:19 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70970-2000.03.14-07.54.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>X-PH: V4.4@bnl.gov
>From: "Dave D'Epagnier" <DAVED@ctilidar.com>
>To: "'Ron Schroeder'" <rjs@bnl.gov>
>Subject: RE: [ss] RE: Cordless Phone FHSS 900 MHz
>Date: Mon, 13 Mar 2000 14:21:11 -0700
>X-Mailer: Internet Mail Service (5.5.2650.21)
>
>Ok great, I'm getting excited about this. I hadn't realized that touch tone
>phones have a group of low tones and a group of high tones. I'm going to
>have to get up to speed the frequency of those tones. Those are simply the
>tones I hear when I push the 0-9 buttons right? I also hadn't realized that
>speech has a distinct group of frequency content above and below 1024 Hz. As
>far as ID goes, when the remote station ID's how is that done? Is it a
>synthesized voice like you hear on repeaters, or something simpler?
>
>Thanks for your time,
>
>--DAve
>
>   ----------
>   From: Ron Schroeder [SMTP:rjs@bnl.gov]
>   Sent: Monday, March 13, 2000 2:15 PM
>   To: Dave D'Epagnier
>   Subject: RE: [ss] RE: Cordless Phone FHSS 900 MHz
>
>   At 11:53 AM 3/13/00 -0700, you wrote:
>   >Ron, excellent. A couple of questions though.
>   >
>   >1.   Is the reason why you use a 1024Hz tone for the PTT function
>(which
>   >has to be notched out later) because you only have access to the
>analog
>   >audio input/output of this SS transceiver? Seems like that's right
>in the
>   >middle of the voice spectrum. I guess all one can do is send audio
>tones for
>   >control, though.
>   >2.   What is the ID function, and timing for?
>   >
>
>   1. a. 1024 is between the low group and the high group of touch
>tones.
>   b. 1024 is between the lower spectral group and the upper
>spectral group
>   of   speech sounds.
>   c. Filtering it out effects both at a very minimum.
>
>   2. Since with the antenna gain, the cordless base is outside of part
>15
>   rules, the signal from the base to me needs to be ID'd. The signal
>from
>   the cordless phone to the base is ID'd whenever I ID because it is
>carrying
>   my voice. Timing shut things off if I run out of range etc.
>
>
>---
>   --------
>   Ron Schroeder

>   WD8CDH
>   E. E. S.
>   wd8cdh@bnl.gov
>   rjs@bnl.gov
>   ron@112motors.com
>   516 344-4561 Day
>   516 286-5677 Nite
>   after April 1st. use area code 631
>

Ron Schroeder
Brookhaven National Lab
Building 911A
Upton NY 11793

rjs@bnl.gov
516 344-4561
after April 1st use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 08:54:44 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70969-2000.03.14-07.54.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>X-PH: V4.4@bnl.gov
>From: "Dave D'Epagnier" <DAVED@ctilidar.com>
>To: "'Ron Schroeder'" <rjs@bnl.gov>
>Subject: RE: [ss] RE: Cordless Phone FHSS 900 MHz
>Date: Mon, 13 Mar 2000 11:53:12 -0700
>X-Mailer: Internet Mail Service (5.5.2650.21)
>
>Ron, excellent. A couple of questions though.
>
>1.   Is the reason why you use a 1024Hz tone for the PTT function (which
>has to be notched out later) because you only have access to the analog
>audio input/output of this SS transceiver? Seems like that's right in the
>middle of the voice spectrum. I guess all one can do is send audio tones for
>control, though.
>2.   What is the ID function, and timing for?
>
>Thanks,
>Dave
>
>   ----------
>   From: Ron Schroeder [SMTP:rjs@bnl.gov]
>   Sent: Monday, March 13, 2000 10:41 AM
>   To: TAPR Spread Spectrum Special Interest Group
>   Subject: [ss] RE: Cordless Phone FHSS 900 MHz
>
>   At 09:18 AM 3/13/00 -0700, you wrote:
>   >Could one of these units be for remote control of a ham radio
>station? I've
>   >got a station located about 12 miles line of sight from my home.
>I'd like to
>   >be able to achieve HF rig control as well as transmit and receive
>SSB from
>   >the remote site. How would this be achieved?<snip>
>
>   I emulated a phone line for the cordless phone base. I used a
>couple of
>   op-amps to make a 2-wire to 4-wire converter (really a 1-wire plus
>ground
>   to 2-wire plus ground) and simulated the phone line current with a
>large
>   inductor and a current limiting resistor. I detected the base "off
>hook"
>   with an opto. Ham rig keying is achieved with a 1024Hz tone osc. in
>the
>   handset that is enabled with a "ptt" switch that I put in place of
>the
>   headphone jack that was conviently located where my thumb went. A
>1024Hz
>   tone decoder in the base logic keyed the ham rig. The tone was

>notched out
>   of the audio with an active notch filter to keep it from being
>heard. A
>   touch tone decoder and a home-brew micro took care of ID, timing and
>freq.
>   control of the ham rig. DTMF for control also had to have a 256Hz
>tone
>   (512Hz/1024Hz selected with a slide switch that used to be a ringer
>switch)
>   so Touch Tones sent thru the remote base didn't cause unexpected
>control
>   functions.
>
>---
>   --------
>   Ron Schroeder
>   WD8CDH
>   E. E. S.
>   wd8cdh@bnl.gov
>   rjs@bnl.gov
>   ron@112motors.com
>   516 344-4561 Day
>   516 286-5677 Nite
>   after April 1st. use area code 631
>
>   ---
>   You are currently subscribed to ss as: daved@ctilidar.com
>   To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

Ron Schroeder
Brookhaven National Lab
Building 911A
Upton NY 11793

rjs@bnl.gov
516 344-4561
after April 1st use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

34. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 09:03:17 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70974-2000.03.14-08.02.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

<snip>
>> As far as ID goes, when the remote station ID's how is that done? Is it a
>>synthesized voice like you hear on repeaters, or something simpler?
>>
>>Thanks for your time,
>>
>>--DAve

I use CW at 20wpm. I used to use a voice recorder that I gutted from a
greeting card.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] RE: Cordless Phone FHSS 900 MHz

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Tue, 14 Mar 2000 07:03:09 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70976-2000.03.14-08.05.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Excuse me if this question has been answered at nausium in the past, but
what good does ID-ing in spread spectrum do? Is anybody other than my
intended receiver really going to be able to identify my transmission if I
do that? Surely I'm not supposed to go narrow band to do this, right? What
all is involved in ID-ing besides giving my call sign? Am I supposed to go
narrow band (which I can't do with a FHSS telephone) and give the spreading
code also??

--Dave

        From: Ron Schroeder [SMTP:rjs@bnl.gov]
        Sent: Tuesday, March 14, 2000 7:03 AM
        To: TAPR Spread Spectrum Special Interest Group
        Subject: [ss] RE: Cordless Phone FHSS 900 MHz

        <snip>
        >> As far as ID goes, when the remote station ID's how is that done?
Is it a
        >>synthesized voice like you hear on repeaters, or something
simpler?
        >>
        >>Thanks for your time,
        >>
        >>--DAve

        I use CW at 20wpm. I used to use a voice recorder that I gutted
from a
        greeting card.

        Ron Schroeder
        WD8CDH
        E. E. S.
        wd8cdh@bnl.gov
        rjs@bnl.gov
        ron@112motors.com
        516 344-4561 Day
        516 286-5677 Nite
        after April 1st. use area code 631

        You are currently subscribed to ss as: daved@ctilidar.com
        To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 09:24:02 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70978-2000.03.14-08.23.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:03 AM 3/14/00 -0700, you wrote:
>Excuse me if this question has been answered at nausium in the past, but
>what good does ID-ing in spread spectrum do? Is anybody other than my
>intended receiver really going to be able to identify my transmission if I
>do that? Surely I'm not supposed to go narrow band to do this, right? What
>all is involved in ID-ing besides giving my call sign? Am I supposed to go
>narrow band (which I can't do with a FHSS telephone) and give the spreading
>code also??
>
>--Dave
>
§97.119 Station identification.

(a) Each amateur station, except a space station or telecommand station,
must transmit its assigned call sign on its

transmitting channel at the end of each communication, and at least every
ten minutes during a communication, for
the purpose of clearly making the source of the transmissions from the
station known to those receiving the
transmissions. No station may transmit unidentified communications or
signals, or transmit as the station call sign,
any call sign not authorized to the station.

(b) The call sign must be transmitted with an emission authorized for the
transmitting channel in one of the
following ways:

     (1) By a CW emission. When keyed by an automatic device used only for
identification, the speed must
     not exceed 20 words per minute;

     (2) By a phone emission in the English language. Use of a standard
phonetic alphabet as an aid for correct
     station identification is encouraged;

I think part (b) means that ss voice or CW is ok.

Ron Schroeder
Brookhaven National Lab
Building 911A
Upton NY 11793

rjs@bnl.gov
516 344-4561
after April 1st use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

37. [ss] RE: Cordless Phone FHSS 900 MHz

From: Lee810@aol.com
Date: Tue, 14 Mar 2000 09:38:32 EST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70984-2000.03.14-08.38.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In a message dated 3/14/00 7:09:34 AM Mountain Standard Time,
DAVED@ctilidar.com writes:

> Excuse me if this question has been answered at nausium in the past, but
> what good does ID-ing in spread spectrum do? Is anybody other than my
> intended receiver really going to be able to identify my transmission if I
> do that? Surely I'm not supposed to go narrow band to do this, right? What
> all is involved in ID-ing besides giving my call sign? Am I supposed to go
> narrow band (which I can't do with a FHSS telephone) and give the spreading
> code also??

It's for the courtesy of any government employees who may be listening in on
your QSO. The spreading codes must be those approved by the government in
accordance with FCC regulations.

Lee Devlin, KØLEE (K0LEE)
Greeley, CO
http://members.aol.com/lee810/ham.html

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

38. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 09:47:22 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70991-2000.03.14-08.46.46--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

A
>It's for the courtesy of any government employees who may be listening in on
>your QSO. The spreading codes must be those approved by the government in
>accordance with FCC regulations.

>
>Lee Devlin, KØLEE (K0LEE)
>Greeley, CO
>http://members.aol.com/lee810/ham.html

I think that the below rule is just about all that is left of the ss
technical requirements since the simplification.

-Ron
WD8CDH

§97.311 SS emission types.

(a) SS emission transmissions by an amateur station are authorized only for
communications between points within
areas where the amateur service is regulated by the FCC and between an area
where the amateur service is
regulated by the FCC and an amateur station in another country that permits
such communications. SS emission
transmissions must not be used for the purpose of obscuring the meaning of
any communication.

(b) A station transmitting SS emissions must not cause harmful interference
to stations employing other authorized
emissions, and must accept all interference caused by stations employing
other authorized emissions.

(c) When deemed necessary by a District Director to assure compliance with
this Part, a station licensee must:

     (1) Cease SS emission transmissions;

     (2) Restrict SS emission transmissions to the extent instructed; and

     (3) Maintain a record, convertible to the original information (voice,
text, image, etc.) of all spread spectrum
     communications transmitted.

(d) The transmitter power must not exceed 100 W under any circumstances. If
more than 1 W is used, automatic
transmitter control shall limit output power to that which is required for
the communication. This shall be
determined by the use of the ratio, measured at the receiver, of the
received energy per user data bit (Eb) to the
sum of the received power spectral densities of noise (N0) and co-channel
interference (I0). Average transmitter
power over 1 W shall be automatically adjusted to maintain an Eb/(N0 + I0)
ratio of no more than 23 dB at the
intended receiver.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
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516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

39. [ss] RE: Cordless Phone FHSS 900 MHz

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Tue, 14 Mar 2000 07:49:16 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-70994-2000.03.14-08.52.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Can someone point me to an online source of the FCC rules on this? I want to
find out what the allowable spreading codes are. I'm wondering if the same
rules apply to cordless (low EIRP) phones as higher power SS transceivers.
Also, why do manufactures of FHSS modems and phones claim secure

communications if they can only use FCC approved codes? Couldn't anyone with
a FHSS scanner (are these even made?) listen in on communications using
these devices?

--Dave

        From: Lee810@aol.com [SMTP:Lee810@aol.com]
        Sent: Tuesday, March 14, 2000 7:39 AM
        To: TAPR Spread Spectrum Special Interest Group
        Subject: [ss] RE: Cordless Phone FHSS 900 MHz

        In a message dated 3/14/00 7:09:34 AM Mountain Standard Time,
        DAVED@ctilidar.com writes:

        > Excuse me if this question has been answered at nausium in the
past, but
        > what good does ID-ing in spread spectrum do? Is anybody other
than my
        > intended receiver really going to be able to identify my
transmission if I
        > do that? Surely I'm not supposed to go narrow band to do this,
right? What
        > all is involved in ID-ing besides giving my call sign? Am I
supposed to go
        > narrow band (which I can't do with a FHSS telephone) and give the
spreading
        > code also??

        It's for the courtesy of any government employees who may be
listening in on
        your QSO. The spreading codes must be those approved by the
government in
        accordance with FCC regulations.

        Lee Devlin, KØLEE (K0LEE)
        Greeley, CO
        http://members.aol.com/lee810/ham.html

        You are currently subscribed to ss as: daved@ctilidar.com
        To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

40. [ss] RE: Cordless Phone FHSS 900 MHz

From: "Robert A. Buaas" <buaas@wireless.net>
Date: Tue, 14 Mar 2000 07:44:16 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71012-2000.03.14-09.52.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Can someone point me to an online source of the FCC rules on this? I want to
> find out what the allowable spreading codes are. I'm wondering if the same
> rules apply to cordless (low EIRP) phones as higher power SS transceivers.
> Also, why do manufactures of FHSS modems and phones claim secure
> communications if they can only use FCC approved codes? Couldn't anyone with
> a FHSS scanner (are these even made?) listen in on communications using
> these devices?

There is no longer any restriction on spreading codes in the Amateur Service.
Part 15.247, which regulates license-free operation such as cordless phones,
sets minimum limits on process gain (which translates to the number of hopping
channels used before the sequence repeats for FH systems). No code sequences
are specified. Makers of part-15 devices must get type-approval, which involves
a showing that the 15.247 requirements are met. Claims of privacy are seldom
made based on the use of SS technology. All the units I've seen have data
scramblers separate from the SS spreaders. This is NOT high-grade encryption,
but just enough scrambling so that they can claim privacy if dragged into court
(the key length is very short)

best regards to all/bob K6KGS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

41. [ss] RE: Cordless Phone FHSS 900 MHz

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Tue, 14 Mar 2000 09:21:22 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71019-2000.03.14-10.24.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks, Bob and others. It sure seems like it would be difficult to listen in on an unscrambled SS conversation if the spreading code is not known, so ID-ing does seem pretty frivolous.

--Dave

> ----------
> From: Robert A. Buaas [SMTP:buaas@wireless.net]
> Sent: Tuesday, March 14, 2000 8:44 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: Cordless Phone FHSS 900 MHz
>
> > Can someone point me to an online source of the FCC rules on this? I want to
> > find out what the allowable spreading codes are. I'm wondering if the same
> > rules apply to cordless (low EIRP) phones as higher power SS transceivers.
> > Also, why do manufactures of FHSS modems and phones claim secure
> > communications if they can only use FCC approved codes? Couldn't anyone with
> > a FHSS scanner (are these even made?) listen in on communications using
> > these devices?
>
> There is no longer any restriction on spreading codes in the Amateur Service.
> Part 15.247, which regulates license-free operation such as cordless phones,
> sets minimum limits on process gain (which translates to the number of hopping
> channels used before the sequence repeats for FH systems). No code sequences
> are specified. Makers of part-15 devices must get type-approval, which involves
> a showing that the 15.247 requirements are met. Claims of privacy are seldom
> made based on the use of SS technology. All the units I've seen have data
> scramblers separate from the SS spreaders. This is NOT high-grade encryption,
> but just enough scrambling so that they can claim privacy if dragged into court
> (the key length is very short)
>
> best regards to all/bob K6KGS
>
> ---
> You are currently subscribed to ss as: daved@ctilidar.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

42. [ss] RE: Cordless Phone FHSS 900 MHz

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 11:34:46 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71020-2000.03.14-10.34.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:21 AM 3/14/00 -0700, you wrote:
>Thanks, Bob and others. It sure seems like it would be difficult to listen
>in on an unscrambled SS conversation if the spreading code is not known, so
>ID-ing does seem pretty frivolous.
>
>--Dave
>

Frivolous but required. But then how many repeaters ID their links from

recievers?

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

43. [ss] Remote rig operation

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Tue, 14 Mar 2000 11:47:00 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71030-2000.03.14-12.49.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does this sound like it would work for remote station control?

1. Get a cheap FHSS cordless phone. Open it up and tap into the microphone and speaker connections.
2. Attach the mic and speaker connections to a PC sound card output and input.
3. Do the link calculations and add a high gain antenna and amplifier if necessary to each end.
4. On the command station end of the link, write a rig control program using Labview, Visual Basic or whatever that would send high frequency audio tones 4-6KHz range for the rig commands out to the sound card. For voice transmission, low pass filter the microphone at about 2.5KHz and send directly to the sound card output.
5. On the remote station end, have another computer with sound card to interface to the FHSS base station. Have a low pass filter in line with the audio output to the rig microphone input. Have a high pass filter in line with the audio to the PC sound card input.
6. Write a program for receiving audio tones and converting them to rig commands. Pump that into the rig remote control jack.
7. Reverse the senario for audio and rig info coming in the opposite direction.

I'd have to fake the base set into "thinking" it was connected to a phone line, or use the intercom mode as someone else suggested.
I wonder what the unspread data bandwidth is of cordless phone. How many bps do they operate at? What am I missing?

--Dave

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

44. [ss] Re: Remote rig operation

From: Ron Schroeder <rjs@bnl.gov>
Date: Tue, 14 Mar 2000 14:59:43 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71039-2000.03.14-13.59.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:47 AM 3/14/00 -0700, you wrote:
>Does this sound like it would work for remote station control?
>
>1. Get a cheap FHSS cordless phone. Open it up and tap into the
>microphone and speaker connections.
>2. Attach the mic and speaker connections to a PC sound card output and
>input.
>3. Do the link calculations and add a high gain antenna and amplifier
>if necessary to each end.
>4. On the command station end of the link, write a rig control program
>using Labview, Visual Basic or whatever that would send high frequency audio
>tones 4-6KHz range for the rig commands out to the sound card. For voice
>transmission, low pass filter the microphone at about 2.5KHz and send
>directly to the sound card output.

>5.   On the remote station end, have another computer with sound card to
>interface to the FHSS base station. Have a low pass filter in line with the
>audio output to the rig microphone input. Have a high pass filter in line
>with the audio to the PC sound card input.
>6.   Write a program for receiving audio tones and converting them to rig
>commands. Pump that into the rig remote control jack.
>7.   Reverse the senario for audio and rig info coming in the opposite
>direction.
>
>I'd have to fake the base set into "thinking" it was connected to a phone
>line, or use the intercom mode as someone else suggested.
>I wonder what the unspread data bandwidth is of cordless phone. How many bps
>do they operate at? What am I missing?
>
>
>--Dave

It would work but writing a driver for LabView to see the sound card won't
be easy. You could decode tones by dooing a FFT on the soundcards data.

It would be better to use the touchtone keys from the cordless phones
handset and decode them with a $5.00 DTMF decoder chip at the remote base.
Most ss phones don't generate the tones in the handset. They send data to
the base and the base generates the tones. You should be able to get 10 or
20 digits/second.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

45. [ss] CORDLESS PHONE FHSS

From: k2pat@webtv.net (Pat Howard)
Date: Wed, 15 Mar 2000 07:51:40 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71200-2000.03.15-06.50.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dave,
Don't just add amplifiers. Pre-amps are OK, but anything over 1 Watt on
the transmitter needs active power control.

Since putting an ID on any 1 of 50 frequencies is frivolous, the FCC
deleted that requirement. I suspect that if your transmitter gets
tracked down as an offender, you'd better have a station license
attached per the rules.

       Pat

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

46. [ss] Re: CORDLESS PHONE FHSS and ID

From: Ron Schroeder <rjs@bnl.gov>
Date: Wed, 15 Mar 2000 08:24:06 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71209-2000.03.15-07.23.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:51 AM 3/15/00 -0500, you wrote:
>Dave,
>Don't just add amplifiers. Pre-amps are OK, but anything over 1 Watt on
>the transmitter needs active power control.
>
>Since putting an ID on any 1 of 50 frequencies is frivolous, the FCC
>deleted that requirement. I suspect that if your transmitter gets
>tracked down as an offender, you'd better have a station license

>attached per the rules.
>
>   Pat
I still think that ss ham needs to be ID'd unless the radio has no
modification of RF or antenna and meets part 15. You may not be able to
copy it with a scanner but I think this still applies.:

§97.119 Station identification.

(a) Each amateur station, except a space station or telecommand station,
must transmit its assigned call sign on its
transmitting channel at the end of each communication, and at least every
ten minutes during a communication, for
the purpose of clearly making the source of the transmissions from the
station known to those receiving the
transmissions. No station may transmit unidentified communications or
signals, or transmit as the station call sign,
any call sign not authorized to the station.

I think that this means that even ss must be ID'd. I could not find
anything that said that a ss station must ID an any emmission mode other
than ss.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

47. [ss] CORDLESS PHONE FHSS ID

From: k2pat@webtv.net (Pat Howard)
Date: Thu, 16 Mar 2000 07:47:41 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71438-2000.03.16-06.46.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ron,
The ID must still be there if you modify the phone for Ham use,
including any wires or antennas that take it out of the manufacturers
Part 15 approval. The ID requirement was said here and in the R&O so I
didn't repeat it. What's new is that it can be ID'd in any fashion,
which I take to mean in-band SS, not a separate frequency (only 1 of the
50 or more being used). All the other methods proposed by TAPR are
presumably good also.
               Pat

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

48. [ss] Re: CORDLESS PHONE FHSS ID

From: John Hansen <john@hansen.net>
Date: Thu, 16 Mar 2000 08:55:50 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71446-2000.03.16-07.42.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:47 AM 3/16/00 -0500, you wrote:
>Ron,
>The ID must still be there if you modify the phone for Ham use,
>including any wires or antennas that take it out of the manufacturers
>Part 15 approval. The ID requirement was said here and in the R&O so I
>didn't repeat it. What's new is that it can be ID'd in any fashion,
>which I take to mean in-band SS, not a separate frequency (only 1 of the
>50 or more being used). All the other methods proposed by TAPR are
>presumably good also.
>   Pat

Do these phones meet the FCC requirements for automatic power
control? Perhaps the power output is so low that they avoid these
requirements?

John W2FS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

49. [ss] Re: CORDLESS PHONE FHSS ID

From: Ron Schroeder <rjs@bnl.gov>
Date: Thu, 16 Mar 2000 10:46:35 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71468-2000.03.16-09.45.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

<snip>
>Do these phones meet the FCC requirements for automatic power
>control? Perhaps the power output is so low that they avoid these
>requirements?
>
>John W2FS

All consumer phones are less than 1W. Some do have power control to extend
battery life. They are low enough power that they don't need power control
to meet the rules. Most ss phones are 250mW or less (The limit is 1000mW).
 Most non-ss phones are 50mW or less. None of the 2.4GHz phones that I
have seen have the range of a 900MHz ss phone (except in the minds of
marketing). I don't know if hooking up a cordless phone (with no
modifications) to a ham rig instead of the phone system thru its RJ11 plug
invalidates its part 15 requirements therefore requiring ID so I ID it anyway.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

50. [ss] Re: CORDLESS PHONE FHSS ID

From: Ron Schroeder <rjs@bnl.gov>
Date: Thu, 16 Mar 2000 11:22:25 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71480-2000.03.16-10.21.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

<snip>
<I don't know if hooking up a cordless phone (with no
>modifications) to a ham rig instead of the phone system thru its RJ11 plug
>invalidates its part 15 requirements therefore requiring ID so I ID it
anyway.

I think that the following means that if a ham modifies a part 15 device in
a manner that doesn't make it exceed its origional power it is still part
15 compliant.

                        TITLE 47--TELECOMMUNICATION

            CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION

PART 15--RADIO FREQUENCY DEVICES--Table of Contents

                            Subpart A--General

Sec. 15.23 Home-built devices.

    (a) Equipment authorization is not required for devices that are not

marketed, are not constructed from a kit, and are built in quantities of five or less for personal use.
    (b) It is recognized that the individual builder of home-built equipment may not possess the means to perform the measurements for determining compliance with the regulations. In this case, the builder is expected to employ good engineering practices to meet the specified technical standards to the greatest extent practicable. The provisions of Sec. 15.5 apply to this equipment.

By the way, 902-928 ss less than 50 chan. =250mW, 50 or more chan.=1W. Either can have up to 6DBi of antenna gain. So if we keep them off of the beams it looks like we don't have to ID them.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

51. [ss] Re: Remote rig operation

From: N2HDW@aol.com
Date: Thu, 16 Mar 2000 19:51:24 EST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71544-2000.03.16-18.50.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Dave,

I have been retrofiting electronic equipment for many years and have thought about what you described for some time. The question is what phone should I use. I would like to find an inexpensive spread spectrum phone that I can obtain some kind of documentation on. I would also like to picka phone that will be around for a while so that once I learn how to do the mod I can buy more of them. Does anyone out there have some Ideas on this.

73 Barry N2HDW

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

52. [ss] CORDLESS PHONE FHSS 900MHZ

From: k2pat@webtv.net (Pat Howard)
Date: Fri, 17 Mar 2000 06:20:49 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71677-2000.03.17-05.20.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Barrry,
The reason I bought this phone and alerted the group is that egghead.com was selling these off at $69 plus 12 shipping and I believe the good ones which advertise 4000 ft. range will not be available in the future. Vtech just bought the manufacturer's consumer division from Lucent. This phone is the AT&T Model 9515, developed by Bell Labs when it was AT&T, now Lucent. These are tech weenies, maxing out the range. Even though VTech makes many 900 MHz phones at low cost, there may be no market for a 4000' phone when 2.4 GHz can claim better performance, in marketing terms anyway. I had bought a similar 4000' AT&T model several years ago, so there may be more than 1 AT&T model left. None of the other 900 FHSS phone makers claim 4000', just 4 times the usual range (4x50' is not much).

I intend to modify both the base and the handset. The handset doesn't even have a headset jack so it must be modified for use as a repaeter link. I ran the RF loss budget (4000', 5', 5', 900MHz) to be about 143 dB, a realistic but strong signal for a base station application. To

maintain that strength for 6 miles, I would need to go up the towers maybe 20 to 50 feet, and get 10 to 20 dB of antenna gain (more than 6 dBi if I count the feed loss). I would rather mount external antennas than mount the phone way up the tower and attempt to weatherproof it. There is the chance that one could use the internal antennas, but then omni coverage is not what I want either.

The other features that makes this model worth modifying are the battery backup in the base unit, and the 2-way page which leads to a simple protocol. I could use the RJJ-11 on the base, but then I might need to build a ring generator to use the protocol.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

53. [ss] Re: Remote rig operation

From: Ron Schroeder <rjs@bnl.gov>
Date: Fri, 17 Mar 2000 08:24:04 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71684-2000.03.17-07.23.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:51 PM 3/16/00 EST, you wrote:
>Hi Dave,
>
>I have been retrofiting electronic equipment for many years and have thought
>about what you described for some time. The question is what phone should I
>use. I would like to find an inexpensive spread spectrum phone that I can
>obtain some kind of documentation on. I would also like to picka phone that
>will be around for a while so that once I learn how to do the mod I can buy
>more of them. Does anyone out there have some Ideas on this.
>
>73 Barry N2HDW

Cordless phones are like computers. They both have a green "obsolete" indicator on the front.

The real small $89 AT&T ss phone worked for me.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

54. [ss] Re: Remote rig operation

From: "Dave D'Epagnier" <DAVED@ctilidar.com>
Date: Fri, 17 Mar 2000 06:45:25 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71688-2000.03.17-07.48.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Barry, I bought mine at Radio Shack, but I agree with Ron, what's here today will be gone in a year or so. Hopefully, next years model won't be too difficult to figure out.

I want to put mine on a scope and a spectrum analyzer and find out a few things:

- What is the signal (baseband) bandwidth it can handle ie; how many kbps can it support?
- Is there FEC? What type?

-	What is the tx/rx latency?
-	What kind of overhead (preamble or what ever) does it consume?
-	How many chips does it do?
-	What is the spread bandwidth?
-	What is the output power?

-Dave

From: N2HDW@aol.com [SMTP:N2HDW@aol.com]
Sent: Thursday, March 16, 2000 5:51 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Remote rig operation

Hi Dave,

I have been retrofiting electronic equipment for many years and have thought about what you described for some time. The question is what phone should I use. I would like to find an inexpensive spread spectrum phone that I can obtain some kind of documentation on. I would also like to picka phone that will be around for a while so that once I learn how to do the mod I can buy more of them. Does anyone out there have some Ideas on this.

73 Barry N2HDW

You are currently subscribed to ss as: daved@ctilidar.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

55. [ss] Email from a colleague (Steven Bible)

From: srbible@gate.net
Date: Fri, 17 Mar 2000 10:42:19 PST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71714-2000.03.17-09.47.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The following email message contains information in a product
recommended to you by Steven Bible(srbible@gate.net).
The product is currently featured on Wireless Design & Development Online.

Here is the recommended item:

Spread Spectrum Chipset

<BODY>Consisting of the Am79C440 direct sequence spread spectrum (DSSS) controller chip and the Am79RF440 radio transceiver chip, the new chipset from Advanced Micro Devices allows customers to create a variety of products using a common chipset by programming the onboard ROM to enable different feature sets. The AM79C440 DSSS controller performs protocol, data formatting, audio processing and peripheral functions for a DSSS handset or base station application. It features an on-chip 8051-class microcontroller, a flexible RF interface and a receive signal strength indicator. The Am79RF440 radio transceiver chip integrates all of the transmit and receive functions required in a US900 DSSS digital cordless transceiver architecture, operating in the 902 - 928 MHz ISM band.
<p>
The AMD direct sequence spread spectrum chipset was the answer to a market need for differentiation. In a market segment where the only differentiation factors were industrial design and packaging, AMD aimed at what customers wanted the most, feature differentiation through programmability of design. The program had customers excited and many of them joined a beta phase.
<p>
The added pressure of having customers in line raised the importance of delivering flawlessly and on time. Also independent of the perceived advantages of the chipset, the success of the product was going to be measured in terms of how it performed against the competition. The end product was a programmable solution competitive in terms of voice quality, cost and range. On February 16, 1999 this product was the key to a technology exchange between AMD and the DSP Group. The DSP Group continues the legacy of this technology with design wins and future releases</BODY>

Advanced Micro Devices
P.O. Box 3453

One AMD Place
Sunnyvale, CA 94088-3453

See the item at:
http://www.wirelessdesignmag.com/exec/relpgm.exe?rptid=SHOWPR?ACCT=0029415?ISSUE=0003?RELTYPE=TW?PRODLET
T=A?PRODCODE=D0620

Visit Wireless Design & Development Online at:
http://www.wirelessdesignmag.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

56. [ss] Part 97 Download

From: "Hunter, Bob" <Bob_Hunter@ATK.COM>
Date: Fri, 17 Mar 2000 12:26:21 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71725-2000.03.17-12.25.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I tried downloading the Spread Spectrum rules from:
        http://www.access.gpo.gov/nara/cfr/waisidx_98/47cfr97_98.html

This site is clearly out of date (includes old shift register definition).
Does anyone know where I can download a current version of Part 97?

Thanks,
Bob aa0fg

Robert S. Hunter PE
Senior Principal Development Engineer
Alliant Techsystems Inc.
Telephone: 612.931.7619
Facsimile: 612.931.6512

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

57. [ss] Link to FCC

From: "Richard A. Kirkpatrick" <kirk@bose.com>
Date: Fri, 17 Mar 2000 13:49:20 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71733-2000.03.17-12.48.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try this
http://www.fcc.gov/oet/info/rules/
73 Dick N1AA

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

58. [ss] Re: Part 97 Download

From: Ron Schroeder <rjs@bnl.gov>
Date: Fri, 17 Mar 2000 13:50:00 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71734-2000.03.17-12.49.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:26 PM 3/17/00 -0600, you wrote:
>I tried downloading the Spread Spectrum rules from:
>   http://www.access.gpo.gov/nara/cfr/waisidx_98/47cfr97_98.html
>
>This site is clearly out of date (includes old shift register definition).
>Does anyone know where I can download a current version of Part 97?
>
>Thanks,
>Bob aa0fg
>
>
>Robert S. Hunter PE
>Senior Principal Development Engineer
>Alliant Techsystems Inc.

>Telephone: 612.931.7619
>Facsimile: 612.931.6512

I don't know what happened to that site. On the 14th I downloaded this:

§97.311 SS emission types.

(a) SS emission transmissions by an amateur station are authorized only for communications between points within
areas where the amateur service is regulated by the FCC and between an area where the amateur service is
regulated by the FCC and an amateur station in another country that permits such communications. SS emission
transmissions must not be used for the purpose of obscuring the meaning of any communication.

(b) A station transmitting SS emissions must not cause harmful interference to stations employing other authorized
emissions, and must accept all interference caused by stations employing other authorized emissions.

(c) When deemed necessary by a District Director to assure compliance with this Part, a station licensee must:

     (1) Cease SS emission transmissions;

     (2) Restrict SS emission transmissions to the extent instructed; and

     (3) Maintain a record, convertible to the original information (voice, text, image, etc.) of all spread spectrum
     communications transmitted.

(d) The transmitter power must not exceed 100 W under any circumstances. If more than 1 W is used, automatic
transmitter control shall limit output power to that which is required for the communication. This shall be
determined by the use of the ratio, measured at the receiver, of the received energy per user data bit (Eb) to the
sum of the received power spectral densities of noise (N0) and co-channel interference (I0). Average transmitter
power over 1 W shall be automatically adjusted to maintain an Eb/(N0 + I0) ratio of no more than 23 dB at the
intended receiver.

It sure isn't what is there today. If you check my posts around the same date, you may find other parts of Part 97 that you need. I posted some parts on ss IDing.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

59. [ss] Re: Part 97 Download

From: Ron Schroeder <rjs@bnl.gov>
Date: Fri, 17 Mar 2000 14:05:31 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71738-2000.03.17-13.04.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 01:50 PM 3/17/00 -0500, you wrote:
>At 12:26 PM 3/17/00 -0600, you wrote:
>>I tried downloading the Spread Spectrum rules from:
>>   http://www.access.gpo.gov/nara/cfr/waisidx_98/47cfr97_98.html
>>
>>This site is clearly out of date (includes old shift register definition).

>>Does anyone know where I can download a current version of Part 97?
>>
>>Thanks,
>>Bob aa0fg
>>
>>
>>Robert S. Hunter PE
>>Senior Principal Development Engineer
>>Alliant Techsystems Inc.
>>Telephone: 612.931.7619
>>Facsimile: 612.931.6512

Try this one:

http://www.arrl.org/field/regulations/news/part97/

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

60. [ss] RE: Link to FCC

From: "Hunter, Bob" <Bob_Hunter@ATK.COM>
Date: Fri, 17 Mar 2000 15:55:30 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71760-2000.03.17-15.54.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Unfortunately this doesn't seem to include part 97.

Robert S. Hunter PE
Senior Principal Development Engineer
Alliant Techsystems Inc.
Telephone: 612.931.7619
Facsimile: 612.931.6512

> ----------
> From: Richard A. Kirkpatrick[SMTP:kirk@bose.com]
> Reply To: TAPR Spread Spectrum Special Interest Group
> Sent: Friday, March 17, 2000 12:49 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Link to FCC
>
> Try this
> http://www.fcc.gov/oet/info/rules/
> 73 Dick N1AA
>
>
> ---
> You are currently subscribed to ss as: BOB_HUNTER@ATK.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

61. [ss] Re: Part 97 Download

From: "Hunter, Bob" <Bob_Hunter@ATK.COM>
Date: Fri, 17 Mar 2000 15:56:47 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71762-2000.03.17-15.57.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Seems peculiar that this site would revert to an old version. I can't
imagine what they are up to!

Robert S. Hunter PE
Senior Principal Development Engineer
Alliant Techsystems Inc.
Telephone: 612.931.7619
Facsimile: 612.931.6512

> ----------
> From: Ron Schroeder[SMTP:rjs@bnl.gov]
> Reply To: TAPR Spread Spectrum Special Interest Group
> Sent: Friday, March 17, 2000 12:50 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 97 Download
>
> At 12:26 PM 3/17/00 -0600, you wrote:
> >I tried downloading the Spread Spectrum rules from:
> > http://www.access.gpo.gov/nara/cfr/waisidx_98/47cfr97_98.html
> >
> >This site is clearly out of date (includes old shift register
> definition).
> >Does anyone know where I can download a current version of Part 97?
> >
> >Thanks,
> >Bob aa0fg
> >
> >
> >Robert S. Hunter PE
> >Senior Principal Development Engineer
> >Alliant Techsystems Inc.
> >Telephone: 612.931.7619
> >Facsimile: 612.931.6512
>
>
> I don't know what happened to that site. On the 14th I downloaded this:
>
> §97.311 SS emission types.
>
>
> (a) SS emission transmissions by an amateur station are authorized only
> for
> communications between points within
> areas where the amateur service is regulated by the FCC and between an
> area
> where the amateur service is
> regulated by the FCC and an amateur station in another country that
> permits
> such communications. SS emission
> transmissions must not be used for the purpose of obscuring the meaning of
> any communication.
>
> (b) A station transmitting SS emissions must not cause harmful
> interference
> to stations employing other authorized
> emissions, and must accept all interference caused by stations employing
> other authorized emissions.
>
> (c) When deemed necessary by a District Director to assure compliance with
> this Part, a station licensee must:
>
> (1) Cease SS emission transmissions;
>
> (2) Restrict SS emission transmissions to the extent instructed; and
>
> (3) Maintain a record, convertible to the original information
> (voice,
> text, image, etc.) of all spread spectrum
> communications transmitted.
>
> (d) The transmitter power must not exceed 100 W under any circumstances.
> If
> more than 1 W is used, automatic
> transmitter control shall limit output power to that which is required for
> the communication. This shall be
> determined by the use of the ratio, measured at the receiver, of the
> received energy per user data bit (Eb) to the
> sum of the received power spectral densities of noise (N0) and co-channel
> interference (I0). Average transmitter
> power over 1 W shall be automatically adjusted to maintain an Eb/(N0 + I0)
> ratio of no more than 23 dB at the

> intended receiver.
>
>
> It sure isn't what is there today. If you check my posts around the same
> date, you may find other parts of Part 97 that you need. I posted some
> parts on ss IDing.
> --
> --
> --------
> Ron Schroeder
> WD8CDH
> E. E. S.
> wd8cdh@bnl.gov
> rjs@bnl.gov
> ron@112motors.com
> 516 344-4561 Day
> 516 286-5677 Nite
> after April 1st. use area code 631
>
> ---
> You are currently subscribed to ss as: BOB_HUNTER@ATK.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

62. [ss] Re: Part 97 Download

From: Bob Nielsen <nielsen@primenet.com>
Date: Fri, 17 Mar 2000 15:54:28 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71764-2000.03.17-16.54.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The notice on the http://www.fcc.gov/wtb/rules.html says all of the
Title 47 rules are dated October 1998. Perhaps they only incorporate
new changes into the complete documents at widespread intervals.

On Fri, Mar 17, 2000 at 03:56:47PM -0600, Hunter, Bob wrote:
> Seems peculiar that this site would revert to an old version. I can't
> imagine what they are up to!
>
> Robert S. Hunter PE
> Senior Principal Development Engineer
> Alliant Techsystems Inc.
> Telephone: 612.931.7619
> Facsimile: 612.931.6512
>
> > ----------
> > From: Ron Schroeder[SMTP:rjs@bnl.gov]
> > Reply To: TAPR Spread Spectrum Special Interest Group
> > Sent: Friday, March 17, 2000 12:50 PM
> > To: TAPR Spread Spectrum Special Interest Group
> > Subject: [ss] Re: Part 97 Download
> > >
> > At 12:26 PM 3/17/00 -0600, you wrote:
> > >I tried downloading the Spread Spectrum rules from:
> > >   http://www.access.gpo.gov/nara/cfr/waisidx_98/47cfr97_98.html
> > >
> > >This site is clearly out of date (includes old shift register
> > definition).
> > >Does anyone know where I can download a current version of Part 97?
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> > >Thanks,
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> > >
> > >
> > >Robert S. Hunter PE
> > >Senior Principal Development Engineer
> > >Alliant Techsystems Inc.
> > >Telephone: 612.931.7619
> > >Facsimile: 612.931.6512
> > >
> >
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> > §97.311 SS emission types.
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> >
> > (a) SS emission transmissions by an amateur station are authorized only
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> > communications between points within
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> > area
> > where the amateur service is
> > regulated by the FCC and an amateur station in another country that
> > permits
> > such communications. SS emission
> > transmissions must not be used for the purpose of obscuring the meaning of
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> > (b) A station transmitting SS emissions must not cause harmful
> > interference
> > to stations employing other authorized
> > emissions, and must accept all interference caused by stations employing
> > other authorized emissions.
> >
> > (c) When deemed necessary by a District Director to assure compliance with
> > this Part, a station licensee must:
> >
> >   (1) Cease SS emission transmissions;
> >
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> >
> >   (3) Maintain a record, convertible to the original information
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> > text, image, etc.) of all spread spectrum
> >   communications transmitted.
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> > (d) The transmitter power must not exceed 100 W under any circumstances.
> > If
> > more than 1 W is used, automatic
> > transmitter control shall limit output power to that which is required for
> > the communication. This shall be
> > determined by the use of the ratio, measured at the receiver, of the
> > received energy per user data bit (Eb) to the
> > sum of the received power spectral densities of noise (N0) and co-channel
> > interference (I0). Average transmitter
> > power over 1 W shall be automatically adjusted to maintain an Eb/(N0 + I0)
> > ratio of no more than 23 dB at the
> > intended receiver.
> >
> >
> > It sure isn't what is there today. If you check my posts around the same
> > date, you may find other parts of Part 97 that you need. I posted some
> > parts on ss IDing.
> > --
> > --
> > --------
> > Ron Schroeder
> > WD8CDH
> > E. E. S.
> > wd8cdh@bnl.gov
> > rjs@bnl.gov
> > ron@112motors.com
> > 516 344-4561 Day
> > 516 286-5677 Nite
> > after April 1st. use area code 631
> >
> > ---
> > You are currently subscribed to ss as: BOB_HUNTER@ATK.COM
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
>
> ---
> You are currently subscribed to ss as: NIELSEN@PRIMENET.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

--
Bob Nielsen, N7XY (RN2)   nielsen@primenet.com
Tucson, AZ DM42nh QRP-L #1985 SOC #77   http://www.primenet.com/~nielsen

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

63. [ss] Re: CORDLESS PHONE FHSS 900MHZ

From: N2HDW@aol.com
Date: Fri, 17 Mar 2000 21:23:53 EST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71789-2000.03.17-20.23.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Pat,
Thanks for the answer, It appears that there are many experimenters out there that share our interest in modifying these phones for wireless applications. I have a tendency to ignore the claims that the retailers make about consumer electronic equipment but the 4000 ft spec. appears to have alerted you to this device as being unique and that is a good thing. I checked the egghead web page for the 9515 phone and it was not one of the models that they were currently selling. There were some much higher like 9550 models, do you think they are similar to what you are familiar with ? I disagree with your statement that there may be no market for a 4000 ft phone in the future. Historically range, has always been an important aspect of popular cordless phones. I am also very interested in the new 2.4 gHz stuff but I have trouble believing that it will have enhanced range over the 900 mHz stuff. The only advantage that I see on the 2.4 gHz band is that it is a clean band. For the most part the FCC has not licensed any of the garbage that is on the 902 to 928 mHz band so the noise floor should be considerably lower but how long will that last. The propagation at 2.4 gHz as compared to 900 mHz for this application must be dramatically reduced.

My application for these phones is slightly different than yours but I disagree with your premise that it is easier to run feed lines 50 ft up the tower as compared to water proofing the cordless phone. You can purchase sealed waterproof enclosures in steel, aluminum, or stainless steel that will easily handle this phone for under $150. This gives you a major advantage in your RF loss budget and you do not have to purchase a long run of expensive hard line. As an ITS engineer I use a lot of these waterproof boxes so if you need more detailed info just let me know.

Thanks again for the info.

73 Barry N2HDW

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

64. [ss] Re: CORDLESS PHONE FHSS 900MHZ

From: Barry McLarnon VE3JF <bm@lynx.ve3jf.ampr.org>
Date: Sat, 18 Mar 2000 00:28:15 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71809-2000.03.17-23.27.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

N2HDW@aol.com wrote:
> The only advantage that I see on the 2.4 gHz band is that it is a clean band.
> For the most part the FCC has not licensed any of the garbage that is on the
> 902 to 928 mHz band so the noise floor should be considerably lower but how
> long will that last.

Not long, I'm afraid. 2.4 GHz ain't what it used to be. I've been running a couple of DSSS links (WaveLAN) on 2.4 GHz since August 1998. Both are on 10 mile line-of-sight paths over mainly urban terrain, to a common access point. The access point has a panel antenna (16 dBi gain) with 45 degree beamwidth to cover both paths, and the other ends have those ubiquitous grid parabolics (23 dBi gain) from Conifer. When I first set up the links, I put a spectrum analyzer on the access point antenna, and found the 2.4 GHz band to be pretty quiet - just some transient stuff near the high end. The WaveLANs, which I centered at 2422 MHz, worked well for a year and a half, but in recent weeks the performance of both links has deteriorated quite badly. I looked at the spectrum at the access point location again, and what a difference from '98! Put the analyzer on max hold for awhile to capture the hoppers and transient DS stuff, and the ISM band looks like wall-to-wall junk. Replacing the 16 dBi sectoral antenna with a 23 dBi parabolic got the links back to their former performance, but only for one link at a time, since they're too far apart in azimuth for the beamwidth of the higher gain antenna. Anyway, the bottom line is that, thanks to the proliferation of 802.11 and other ISM stuff, the noise floor at 2.4 GHz is rising steadily.

BTW, I notice that Conifer was recently swallowed up by Andrew - bet those antennas won't be so cheap anymore...

Barry

--
  Barry McLarnon VE3JF | bm@hydra.carleton.ca
  Ottawa Amateur Radio Club | bm@lynx.ve3jf.ampr.org
  Packet Working Group | http://hydra.carleton.ca

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

65. [ss] VERY INTERESTING QAM ASIC!!!

From: Robert McGwier <rwmcgwier@home.com>
Date: Sat, 18 Mar 2000 09:33:01 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71867-2000.03.18-08.32.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have no financial interest in Broadcom (except maybe in my mutual funds,
managed by others).

Looking for a cheap transceiver to do (say) 10 Mbps on the air? My company
is in the process of buying 100 and paying $80 a piece, so I suspect we could
get them for under $200 a piece. At this price, I can (and will) experiment
with these on my own. What are they?

http://www.broadcom.com

Part number: BCM6020 "DSL" transceiver (baloney, it is a full QAM
transceiver/packetizer, FEC encoder/decoder. The block diagram has
me almost having an tech-gasm.

The DSL and Cablemodem industry and digital TV industries are
revolutionizing megabit rates QAM transceivers.

Bob

Click here for Free Video!!
http://www.gohip.com/freevideo/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

66. [ss] Re: CORDLESS PHONE FHSS 900MHZ

From: Ron Schroeder <rjs@bnl.gov>
Date: Sat, 18 Mar 2000 13:19:50 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71909-2000.03.18-12.20.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is an interesting phone. It even has a removable antenna which I
thought was against part 15.

http://www.1cache.com/1cache/ensnpbx90ull.html

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

67. [ss] Re: VERY INTERESTING QAM ASIC!!!

From: Derek Lassen <kn6td@clubnet.net>
Date: Sat, 18 Mar 2000 12:28:12 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71928-2000.03.18-14.35.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This thing looks similar to the Stel2176 (Used to be Stanford Telecom, is
now chipzilla(Intel)).

Is it real? And available?

If they make it work and produce it it could work wonders.

I am currently working on project to use the Stel2176 on 10 GHz.

At 09:33 AM 3/18/00 -0500, you wrote:
>I have no financial interest in Broadcom (except maybe in my mutual funds,
>managed by others).
>
>Looking for a cheap transceiver to do (say) 10 Mbps on the air? My company
>is in the process of buying 100 and paying $80 a piece, so I suspect we could
>get them for under $200 a piece. At this price, I can (and will) experiment
>with these on my own. What are they?
>
>http://www.broadcom.com
>
>Part number: BCM6020 "DSL" transceiver (baloney, it is a full QAM
>transceiver/packetizer, FEC encoder/decoder. The block diagram has
>me almost having an tech-gasm.
>
>The DSL and Cablemodem industry and digital TV industries are
>revolutionizing megabit rates QAM transceivers.
>
>Bob
>
>---
>Click here for Free Video!!
>http://www.gohip.com/freevideo/
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

68. [ss] CORDLES PHONE AT&T 9550

From: k2pat@webtv.net (Pat Howard)
Date: Sat, 18 Mar 2000 17:19:05 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71936-2000.03.18-16.18.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Barry,
I like distance on a cordless phone, but since nobody else advertises
4000', I didn't see a great rush to maximize the distance.

>From the Egghead.com page follow the link and read the catalog info. If
you can fine the AT&T link, it may show the claimed distance. It may
also be 4000' or it may be a dud. Hold Egghead to their claims and if
it says 4000' then you can possibly return it. I don't know that model,
so let the buyer beware. The other hype I saw was a cordless phone with
DIGITAL answerer. That slows down the shopping process too.

900 MHz may be protected from overuse by GSM blocking the sales in most
of the world. Once Bluetooth and all the hopes for 2.4 uses fill out,
it may become less friendly to Hams than 900MHz. All this is just
conjecture, both may be mostly useable in the future but not as wide
open as in the past. Los Angeles wanted to use massive quantities of
2.4 video transmitters at high power, but the FCC denied their petition.
I also saw in the FCC database numerous licensees from 902 to 928 MHz on
every hill within 50 miles of my home. I'm not sure how that happens in
a ham band and how this affects my cordless phone plans.

As for the phone in a box on a tower, I suppose a plastic radome would
work just fine with the antenna inside. I would need a directional gain

antenna inside and that would eliminate coax losses. Since these are
shared tower spaces, the box could not eat up gads of space and would
need to be very rugged.

     Pat

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

69. [ss] Re: VERY INTERESTING QAM ASIC!!!

From: Luis Yanes <melus@bart.us.es>
Date: Sat, 18 Mar 2000 23:34:25 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71937-2000.03.18-16.33.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Robert McGwier wrote:
>
> I have no financial interest in Broadcom (except maybe in my mutual funds,
> managed by others).
>
> Looking for a cheap transceiver to do (say) 10 Mbps on the air? My company
> is in the process of buying 100 and paying $80 a piece, so I suspect we could
> get them for under $200 a piece. At this price, I can (and will) experiment
> with these on my own. What are they?
>
> http://www.broadcom.com
>
> Part number: BCM6020 "DSL" transceiver (baloney, it is a full QAM
> transceiver/packetizer, FEC encoder/decoder. The block diagram has
> me almost having an tech-gasm.
>
> The DSL and Cablemodem industry and digital TV industries are
> revolutionizing megabit rates QAM transceivers.

The datasheet at http://www.broadcom.com/pdf/BCM6020.pdf
as all others are protected by a password. :-(

Fortunately there is more chips with free info to work with.
--
73's de Luis

mail: melus@bart.us.es
Ampr: eb7gwl.ampr.org
http://www.esi.us.es/~melus/   <- Homebrewed Hardware Projects with PCBs

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

70. [ss] A few Questions

From: "Dave D'Epagnier" <depagnier@uswest.net>
Date: Sat, 18 Mar 2000 19:02:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-71960-2000.03.18-20.00.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1. Can anybody tell me approximately how many members are on
this mailing list?

2. And again, what ever happened the Spread Spectrum Scene
Magazine?

tnx

--Dave

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

71. [ss] (no subject)

From: N2HDW@aol.com
Date: Sun, 19 Mar 2000 12:35:56 EST

To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72079-2000.03.19-11.35.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

To: Robert McGwier

I also found the Broadcom device that you described to be protected by pass words ect. What do you mean
 by "on the air" The data that I saw on what was available to me on the Broadband web site appeared to
be a DSL chip for hard wired data networks.

Barry N2HDW

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

72. [ss] Re: VERY INTERESTING QAM ASIC!!!

From: Keith Justice <kf7tp@cybertrails.com>
Date: Sun, 19 Mar 2000 12:55:28 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72099-2000.03.19-13.55.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:34 PM 3/18/00 +0100, you wrote:
>Robert McGwier wrote:
>
>The datasheet at http://www.broadcom.com/pdf/BCM6020.pdf
>as all others are protected by a password. :-(
>
>Fortunately there is more chips with free info to work with.
>--
>73's de Luis
I registered with them using "Amateur Radio KF7TP" as the business name,
and got right in, no wait for human authorization.

Keith

Keith Justice, KF7TP
6759 Wagonwheel Lane
Lakeside, AZ 85929
LL: 520-537-8657
Occ. in Mesa, AZ: 480-461-8687
kf7tp@cybertrails.com
kf7tp@kf7tp.ampr.org

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

73. [ss] Re: (no subject)

From: "Dave D'Epagnier" <depagnier@uswest.net>
Date: Sun, 19 Mar 2000 19:48:22 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72225-2000.03.19-20.40.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yeah, that's what I was thinking. What does that have to do with spread spectrum? It looks like another
modem chip.

Dave K0QE

N2HDW@aol.com wrote:

> To: Robert McGwier
>
> I also found the Broadcom device that you described to be protected by pass words ect. What do you
mean by "on the air" The data that I saw on what was available to me on the Broadband web site appeared
 to be a DSL chip for hard wired data networks.
>
> Barry N2HDW
>
> ---
> You are currently subscribed to ss as: depagnier@uswest.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

74. [ss] Re: (no subject)

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 20 Mar 2000 01:09:06 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72312-2000.03.20-03.16.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What it has to do with spread spectrum is that the frequency is derived
from a direct digital synthesizer which can hop over a wide range at fast
rates and the rest of the chip can lock up on the data.

At 07:48 PM 3/19/00 -0700, you wrote:
>Yeah, that's what I was thinking. What does that have to do with spread
>spectrum? It looks like another modem chip.
>
>Dave K0QE
>
>N2HDW@aol.com wrote:
>
> > To: Robert McGwier
> >
> > I also found the Broadcom device that you described to be protected by
> pass words ect. What do you mean by "on the air" The data that I saw on
> what was available to me on the Broadband web site appeared to be a DSL
> chip for hard wired data networks.
> >
> > Barry N2HDW
> >
> > ---
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> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
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>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

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You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

75. [ss] Re: VERY INTERESTING QAM ASIC!!!

From: Robert McGwier <rwmcgwier@home.com>
Date: Mon, 20 Mar 2000 07:18:02 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72325-2000.03.20-06.17.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Broadcom has !000+ in their inventory, which is about to go down
by 100 ;-). They can produce more.

Bob

At 03:28 PM 03/18/2000 Saturday , you wrote:
>This thing looks similar to the Stel2176 (Used to be Stanford Telecom, is
>now chipzilla(Intel)).
>
>Is it real? And available?
>
>If they make it work and produce it it could work wonders.
>
>I am currently working on project to use the Stel2176 on 10 GHz.
>
>At 09:33 AM 3/18/00 -0500, you wrote:
>>I have no financial interest in Broadcom (except maybe in my mutual funds,
>>managed by others).
>>
>>Looking for a cheap transceiver to do (say) 10 Mbps on the air? My company
>>is in the process of buying 100 and paying $80 a piece, so I suspect we could
>>get them for under $200 a piece. At this price, I can (and will) experiment
>>with these on my own. What are they?
>>
>>http://www.broadcom.com

>>
>>Part number: BCM6020 "DSL" transceiver (baloney, it is a full QAM
>>transceiver/packetizer, FEC encoder/decoder. The block diagram has
>>me almost having an tech-gasm.
>>
>>The DSL and Cablemodem industry and digital TV industries are
>>revolutionizing megabit rates QAM transceivers.
>>
>>Bob
>>
>>---
>>Click here for Free Video!!
>>http://www.gohip.com/freevideo/
>>
>>
>>---
>>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
>---
>You are currently subscribed to ss as: rwmcgwier@home.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

----
Click here for Free Video!!
http://www.gohip.com/freevideo/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

76. [ss] ERP limits on hyper-spatial antenna?

From: Brett Glass <brett@lariat.org>
Date: Mon, 20 Mar 2000 07:28:30 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72345-2000.03.20-08.28.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Two US patent examiners have granted a Colorado inventor a 19-page patent
on a "Hyper-space Antenna." The device is claimed to open a portal to a
"new dimension," through which radio signals can supposedly travel faster
than light. As a convenient side effect, the device is also said to make
plants grow better.

According to the patent,

"All known radio transmissions use known models of time and space
dimensions for sending the RF signal. The present invention has discovered
the apparent existence of a new dimension capable of acting as a medium for
RE [sic] signals. Initial benefits of penetrating this new dimension
include sending RF signals faster than the speed of light, extending the
effective distance of RF transmitters at the same power radiated,
penetrating known RF shielding devices, and accelerating plant growth
exposed to the by-product energy of the RF transmissions."

The full text of the patent can be found at

http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1

And now, my question. If I make use of this revolutionary new invention,
are the ERP (effective radiated power) limits for signals sent through this
new spatial dimension the same as for normal space? Or can I radiate more
power, because the signal is not traversing normal space and therefore
won't interfere with conventional RF devices? I don't know, but I'm sure
the truth is out there....

--Brett Glass

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

77. [ss] DESPREADING

From: "REDBULL Youss" <ucvash@hotmail.com>
Date: Mon, 20 Mar 2000 14:59:29 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72355-2000.03.20-08.59.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear All,

Hello.
I am new to this mailing list. I am workingon Spread spectrum project for my undergrad studies.
I have been able to spread the signal successfully but am not acheiving the same signal in despreading, am using DS method and AM using the same code as used for spreading.
Can anyone suggest any ideas.

Thank You

Joseph

_____
Get Your Private, Free Email at http://www.hotmail.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

78. [ss] RE: ERP limits on hyper-spatial antenna?

From: "Jose M. Valdes R. YV5LIX" <yv5lix@cantv.net>
Date: Mon, 20 Mar 2000 11:54:36 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72366-2000.03.20-09.52.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Brett, I try the link that you suggested but it requires a password to be accessed.

This is the message that I got from the server:

DTWA000E: Net.Data detected an internal error [IBM][CLI Driver] SQL1404N Password
expired. SQLSTATE=08004.

Let's keep amateur radio alive

73/DX from Jose M. Valdes R. YV5LIX
Six Club #864

yv5lix@yv5lix.org
yv5lix@cantv.net
FAX: 425-795-0655 (USA)

http://www.yv5lix.org

-----Mensaje original-----
De: bounce-ss-14798@lists.tapr.org
[mailto:bounce-ss-14798@lists.tapr.org]En nombre de Brett Glass
Enviado el: Lunes, 20 de Marzo de 2000 10:29 a.m.
Para: TAPR Spread Spectrum Special Interest Group
Asunto: [ss] ERP limits on hyper-spatial antenna?

Two US patent examiners have granted a Colorado inventor a 19-page patent on a "Hyper-space Antenna." The device is claimed to open a portal to a "new dimension," through which radio signals can supposedly travel faster than light. As a convenient side effect, the device is also said to make plants grow better.

According to the patent,

"All known radio transmissions use known models of time and space dimensions for sending the RF signal. The present invention has discovered the apparent existence of a new dimension capable of acting as a medium for RE [sic] signals. Initial benefits of penetrating this new dimension include sending RF signals faster than the speed of light, extending the effective distance of RF transmitters at the same power radiated, penetrating known RF shielding devices, and accelerating plant growth exposed to the by-product energy of the RF transmissions."

The full text of the patent can be found at

http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1

And now, my question. If I make use of this revolutionary new invention,
are the ERP (effective radiated power) limits for signals sent through this
new spatial dimension the same as for normal space? Or can I radiate more
power, because the signal is not traversing normal space and therefore
won't interfere with conventional RF devices? I don't know, but I'm sure
the truth is out there....

--Brett Glass

You are currently subscribed to ss as: yv5lix@yv5lix.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

79. [ss] RE: ERP limits on hyper-spatial antenna?

From: "Mitchell, Ed" <Ed.Mitchell@West.Boeing.com>
Date: Mon, 20 Mar 2000 08:13:52 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72373-2000.03.20-10.16.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Try again, I made the connection.

Ed Mitchell
Program manager
OSA-CBM
Phantom Works
The Boeing Company
562 982-6493

> -----Original Message-----
> From: Jose M. Valdes R. YV5LIX [SMTP:yv5lix@cantv.net]
> Sent: Monday, March 20, 2000 7:55 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: ERP limits on hyper-spatial antenna?
>
> Hi Brett, I try the link that you suggested but it requires a password to
> be
> accessed.
>
> This is the message that I got from the server:
>
> DTWA000E: Net.Data detected an internal error [IBM][CLI Driver] SQL1404N
> Password
> expired. SQLSTATE=08004.
>
> Let's keep amateur radio alive
>
> 73/DX from Jose M. Valdes R. YV5LIX
> Six Club #864
>
> yv5lix@yv5lix.org
> yv5lix@cantv.net
> FAX: 425-795-0655 (USA)
>
> http://www.yv5lix.org
>
> -----Mensaje original-----
> De: bounce-ss-14798@lists.tapr.org
> [mailto:bounce-ss-14798@lists.tapr.org]En nombre de Brett Glass
> Enviado el: Lunes, 20 de Marzo de 2000 10:29 a.m.
> Para: TAPR Spread Spectrum Special Interest Group
> Asunto: [ss] ERP limits on hyper-spatial antenna?
>
>
> Two US patent examiners have granted a Colorado inventor a 19-page patent
> on a "Hyper-space Antenna." The device is claimed to open a portal to a
> "new dimension," through which radio signals can supposedly travel faster
> than light. As a convenient side effect, the device is also said to make
> plants grow better.
>

> According to the patent,
>
> "All known radio transmissions use known models of time and space
> dimensions for sending the RF signal. The present invention has discovered
> the apparent existence of a new dimension capable of acting as a medium
> for
> RE [sic] signals. Initial benefits of penetrating this new dimension
> include sending RF signals faster than the speed of light, extending the
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> penetrating known RF shielding devices, and accelerating plant growth
> exposed to the by-product energy of the RF transmissions."
>
> The full text of the patent can be found at
>
> http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1
>
> And now, my question. If I make use of this revolutionary new invention,
> are the ERP (effective radiated power) limits for signals sent through
> this
> new spatial dimension the same as for normal space? Or can I radiate more
> power, because the signal is not traversing normal space and therefore
> won't interfere with conventional RF devices? I don't know, but I'm sure
> the truth is out there....
>
> --Brett Glass
>
>
> ---
> You are currently subscribed to ss as: yv5lix@yv5lix.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
> ---
> You are currently subscribed to ss as: ED.MITCHELL@BOEING.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

80. [ss] Re: DESPREADING

From: "Dave D'Epagnier" <depagnier@uswest.net>
Date: Mon, 20 Mar 2000 18:03:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72492-2000.03.20-20.10.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Joseph, there doesn't seem to be a whole lot of knowledge left on this reflector
and not much interest in answering questions from newbies like us but I'll take
a crack at it.

Direct sequence is binary phase shift keying of the carrier and data in a pseudo
random sequence. It can be done by phase modulating the carrier. It sounds like
you've done this. Now to despread, you must apply the same pseudo random phase
shifting in synchronization with the transmitted signal. That's the hard part,
acquiring and locking to the carrier and synchronizing to it. Are you applying
the despreading sequence synchronized to the spreading sequence?

--Dave

REDBULL Youss wrote:

> Dear All,
>
> Hello.
> I am new to this mailing list. I am workingon Spread spectrum project for my
> undergrad studies.
> I have been able to spread the signal successfully but am not acheiving the
> same signal in despreading, am using DS method and AM using the same code as
> used for spreading.
> Can anyone suggest any ideas.
>
> Thank You
>
> Joseph
> _____
> Get Your Private, Free Email at http://www.hotmail.com
>
> ---

> You are currently subscribed to ss as: depagnier@uswest.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

81. [ss] RE: ERP limits on hyper-spatial antenna?

From: "Roger Rehr" <rrehr@epix.net>
Date: Mon, 20 Mar 2000 21:11:45 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72493-2000.03.20-20.11.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ah, 4/1/....

73 from
Roger Rehr W3SZ ex-AA3QK ex-WA3JYM
mailto:rrehr@epix.net FN20ah
http://www.epix.net/~rrehr
2 Merrymount Road, Reading, PA 19609
610.670.8687

> -----Original Message-----
> From: bounce-ss-5302@lists.tapr.org
> [mailto:bounce-ss-5302@lists.tapr.org]On Behalf Of Mitchell, Ed
> Sent: Monday, March 20, 2000 11:14 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: ERP limits on hyper-spatial antenna?
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

82. [ss] RE: ERP limits on hyper-spatial antenna?

From: Brett Glass <brett@lariat.org>
Date: Mon, 20 Mar 2000 19:33:06 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72496-2000.03.20-20.32.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:11 PM 3/20/2000 , Roger Rehr wrote:

>Ah, 4/1/....

The scary thing is that the patent really was issued. See
for yourself:

http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1

--Brett

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

83. [ss] RE: ERP limits on hyper-spatial antenna?

From: Bob Nielsen <nielsen@primenet.com>
Date: Mon, 20 Mar 2000 20:07:07 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72503-2000.03.20-21.07.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, Mar 20, 2000 at 07:33:06PM -0700, Brett Glass wrote:
> At 07:11 PM 3/20/2000 , Roger Rehr wrote:
>
> >Ah, 4/1/....
>
> The scary thing is that the patent really was issued. See
> for yourself:

If it had been submitted to the Swiss patent office when Einstein

worked there, he might have had some questions about it.

It's been over 40 years since I took a course on patents, but didn't
there used to be a requirement that an invention be "reduced to
practice" before a patent could be issued?

--
Bob Nielsen, N7XY (RN2)   nielsen@primenet.com
Tucson, AZ DM42nh QRP-L #1985 SOC #77   http://www.primenet.com/~nielsen

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

84. [ss] RE: ERP limits on hyper-spatial antenna?

From: Derek Lassen <kn6td@clubnet.net>
Date: Tue, 21 Mar 2000 00:11:57 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72572-2000.03.21-02.19.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Its issued by the same country that thinks there is 999 years in a millenium...

At 08:07 PM 3/20/00 -0700, you wrote:
>On Mon, Mar 20, 2000 at 07:33:06PM -0700, Brett Glass wrote:
> > At 07:11 PM 3/20/2000 , Roger Rehr wrote:
> >
> > >Ah, 4/1/....
> >
> > The scary thing is that the patent really was issued. See
> > for yourself:
>
>If it had been submitted to the Swiss patent office when Einstein
>worked there, he might have had some questions about it.
>
>It's been over 40 years since I took a course on patents, but didn't
>there used to be a requirement that an invention be "reduced to
>practice" before a patent could be issued?
>
>
>--
>Bob Nielsen, N7XY (RN2)   nielsen@primenet.com
>Tucson, AZ DM42nh QRP-L #1985 SOC #77   http://www.primenet.com/~nielsen
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

85. [ss] RE: ERP limits on hyper-spatial antenna?

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 21 Mar 2000 13:55:52 -0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72602-2000.03.21-07.51.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> It's been over 40 years since I took a course on patents, but didn't
> there used to be a requirement that an invention be "reduced to
> practice" before a patent could be issued?

I don't knwo if this was ever a requirement, but it hasn't been for a long
time. The lack of this allows a normal person without a huge amount of
capital to protect their IP. Like the Hollywood actress that invented
spread spectrum, she only had to convince the P.O., not actually build one.

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

86. [ss] Re: DESPREADING

From: "Dave D'Epagnier" <depagnier@uswest.net>
Date: Tue, 21 Mar 2000 07:08:48 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72603-2000.03.21-08.00.36--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Joseph, there doesn't seem to be a whole lot of knowledge left on this reflector

and not much interest in answering questions from newbies like us but I'll take
a crack at it.

Direct sequence is binary phase shift keying of the carrier and data in a pseudo

random sequence. It can be done by phase modulating the carrier. It sounds like
you've done this. Now to despread, you must apply the same pseudo random phase
shifting in synchronization with the transmitted signal. That's the hard part,
acquiring and locking to the carrier and synchronizing to it. Are you applying
the despreading sequence synchronized to the spreading sequence?

--Dave

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> Dear All,
>
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> I am new to this mailing list. I am workingon Spread spectrum project for my
> undergrad studies.
> I have been able to spread the signal successfully but am not acheiving the
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> used for spreading.
> Can anyone suggest any ideas.
>
> Thank You
>
> Joseph
> _____
> Get Your Private, Free Email at http://www.hotmail.com
>
> ---
> You are currently subscribed to ss as: depagnier@uswest.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

87. [ss] Re: DESPREADING

From: "REDBULL Youss" <ucvash@hotmail.com>
Date: Tue, 21 Mar 2000 14:02:29 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72604-2000.03.21-08.01.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dave, thanks for a prompt reply. yes i am applying the same sequence as used
for spreading. But i guess there are other problems. Can you recommend other
sources of information.

Thanks
Joseph

_____
Get Your Private, Free Email at http://www.hotmail.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

88. [ss] Re: DESPREADING

From: "Dave D'Epagnier" <depagnier@uswest.net>
Date: Tue, 21 Mar 2000 07:19:00 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72606-2000.03.21-08.17.28--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Joseph, the despreading sequence needs to be the same and also SYNCHRONIZED with
the spreading sequence. One source is the ARRL Spread Spectrum Sourcebook.
There's all kinds of examples in there for DSSS.

--Dave

REDBULL Youss wrote:

> Dave, thanks for a prompt reply. yes i am applying the same sequence as used
> for spreading. But i guess there are other problems. Can you recommend other
> sources of information.
>
> Thanks
> Joseph
> _____
> Get Your Private, Free Email at http://www.hotmail.com
>
> ---
> You are currently subscribed to ss as: depagnier@uswest.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

89. [ss] EnGenius 900Mhz SN-900 Ultra Cordless Phone System Long Range EnGenius

From: k2pat@webtv.net (Pat Howard)
Date: Tue, 21 Mar 2000 23:31:33 -0500 (EST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72740-2000.03.21-22.31.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.surgeprotect.com/engenius.html

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

90. [ss] Observations

From: Steve Lampereur <kb9mwr@NOSPAM.bigfoot.com>
Date: Wed, 22 Mar 2000 09:00:53 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72855-2000.03.22-08.55.10--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Finally some activity on this list. To bad nobody is really building
anything. It seems to be all typical ham-hype.. talk about and maybe
do it a few years later when the technology is outdated. Thats the
problem, thats why we are always at least 20 years behind the real
world.

For anyone interested in an inexpensive wireless networking using
part 15 wireless ethernet devices at greater distances here is a link
to my well documented modifications.

http://www.dct.com/~multiplx/wireless

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

91. [ss] RE: ERP limits on hyper-spatial antenna?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Wed, 22 Mar 2000 13:48:21 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72914-2000.03.22-13.47.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This was a joke on the Patent Office. It is proof that patent law cannot
work the way we are implementing it.

Brett Glass wrote:

> At 07:11 PM 3/20/2000 , Roger Rehr wrote:
>
> >Ah, 4/1/....

>
> The scary thing is that the patent really was issued. See
> for yourself:
>
> http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1
>
> --Brett
>
> ---
> You are currently subscribed to ss as: mcmillan@cboe.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

92. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Wed, 22 Mar 2000 14:05:17 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72918-2000.03.22-14.04.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

So is there a future for Shephard's SS protocol in TAPR projects? The chip
manufacturers should have plenty of product out there that would suffice.

I believe Tim also has software to simulate the performance of such a network in
different scenarios. I think the stuff is *golden*.

"Eric S. Johansson" wrote:

> ----- Original Message -----
> From: "Jeremy McMillan" <mcmillan@cboe.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Wednesday, March 08, 2000 12:41 PM
> Subject: [ss] Re: a potentially compelling application?
>
> > I happen to believe that wireless should go the way of the Internet:
> > Multipath peer-to-peer network of intelligent repeaters (routers). I like
> > the idea of variable power, decoupled send/recieve FHSS spreading stuff
> > proposed by Tim Shepard in 1996.
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> > more dense the concentration of transcievers, the more aggregate
> > bandwidth. There should be Shepard PDF's on the TAPR web site. I forwarded
> > them months ago...
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> Tim Shepard, KD1KY. Tim's MIT PhD thesis, Decentralized Channel Management
> in Scalable Multihop Spread-Spectrum Packet Radio Networks, is an excellent
> work. Tim found that there is essentially no limit to how large and dense a
> packet radio network can be as long as it uses spread spectrum, transmitter
> power control and minimum-energy routing.
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93. [ss] RE: ERP limits on hyper-spatial antenna?

From: Brett Glass <brett@lariat.org>
Date: Wed, 22 Mar 2000 13:53:07 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72932-2000.03.22-14.52.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:48 PM 3/22/2000 , Jeremy McMillan wrote:

>This was a joke on the Patent Office.

If it was, it's a criminal offense. It's not legal to file a "joke" patent;
it's considered to be fraud.

--Brett

Used to be businesses sold products. Now they just sell
themselves. -- David Johnson

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94. [ss] Re: a potentially compelling application?

From: Douglas Bradford <DGBradford@worldnet.att.net>
Date: Wed, 22 Mar 2000 16:55:33 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-72975-2000.03.22-18.50.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does Tim every drop by? Does anybody know how to get in touch with
him.I'am still in the process
of reading his thesis, from what I have read this could be the basis of
some very interesting products.

This sure sounds like a great way to get email messages through a
intelligent, mulit-hop dynamic network
where every user is also part of the network.
Doug/WD6DGH

At 02:05 PM 3/22/00 -0600, you wrote:
>So is there a future for Shephard's SS protocol in TAPR projects? The chip
>manufacturers should have plenty of product out there that would suffice.
>
>I believe Tim also has software to simulate the performance of such a
>network in
>different scenarios. I think the stuff is *golden*.
>
>"Eric S. Johansson" wrote:
>
> > ----- Original Message -----
> > From: "Jeremy McMillan" <mcmillan@cboe.com>
> > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > Sent: Wednesday, March 08, 2000 12:41 PM
> > Subject: [ss] Re: a potentially compelling application?
> >
> > > I happen to believe that wireless should go the way of the Internet:
> > > Multipath peer-to-peer network of intelligent repeaters (routers). I like
> > > the idea of variable power, decoupled send/recieve FHSS spreading stuff
> > > proposed by Tim Shepard in 1996.
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95. [ss] Re: CORDLES PHONE

From: Ron Schroeder <rjs@bnl.gov>
Date: Thu, 23 Mar 2000 08:20:04 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73072-2000.03.23-07.19.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The cordless phone that I am using on my ham station is an AT&T 9500. It
has a small teflon cable in the base going to the antenna. That cable now
goes to a SMA connector and the electronics of the base is now in a
die-cast BUD box. I did run the charger contacts out of the box so I can
still let the handset and base change their security codes.

I am also running a pair of 45W home brew 450MHz FHSS mobiles. They hop
fairly slow but fast enough that a pl decoder will not detect them if they
fall on a used freq. I am trying to get them to hop fast enough to not
open a carrier squelch. My next mod will be to increase the synth. ref. to
25KHz from the 6.25 that it is now and increase the loop bandwidth. I
suspect that I will have to change the modulation from FM to digital when I
do that. These radios are voice not data.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
516 344-4561 Day
516 286-5677 Nite
after April 1st. use area code 631

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96. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Thu, 23 Mar 2000 09:57:08 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73137-2000.03.23-09.56.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Last year (the last time I checked), I think he was working for a satellite comms
company inventing IP protocol extensions for satellite links. Try searching the web
for "Shepard IP satellite"

Douglas Bradford wrote:

> Does Tim every drop by? Does anybody know how to get in touch with
> him.I'am still in the process
> of reading his thesis, from what I have read this could be the basis of
> some very interesting products.
>
> This sure sounds like a great way to get email messages through a
> intelligent, mulit-hop dynamic network
> where every user is also part of the network.
> Doug/WD6DGH
>
> At 02:05 PM 3/22/00 -0600, you wrote:
> >So is there a future for Shephard's SS protocol in TAPR projects? The chip
> >manufacturers should have plenty of product out there that would suffice.
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> >I believe Tim also has software to simulate the performance of such a
> >network in
> >different scenarios. I think the stuff is *golden*.
> >
> >"Eric S. Johansson" wrote:
> >
> > > ----- Original Message -----
> > > From: "Jeremy McMillan" <mcmillan@cboe.com>
> > > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > > Sent: Wednesday, March 08, 2000 12:41 PM

> > > Subject: [ss] Re: a potentially compelling application?
> > >
> > > > I happen to believe that wireless should go the way of the Internet:
> > > > Multipath peer-to-peer network of intelligent repeaters (routers). I like
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97. [ss] RE: ERP limits on hyper-spatial antenna?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Thu, 23 Mar 2000 10:16:06 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73141-2000.03.23-10.15.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Wether it's against the law or not is moot. The core of the joke is that the
Patent Office cannot prove that the claim is absurd. If they wanted to
prosecute, they would open up the floodgates of people challenging patents on
the grounds of absurdity, and that would create too much work for the Patent
Office to bring on themselves willingly, and thus they would lose face in an
irreparable way.

The bottom line is that the patent process only works if innovative ideas are
scarce. If they are not, discriminating between innovative ideas and absurd
claims becomes an unbearable burden. The question is impossible to dismiss: "Is
it not possible that the claimed process will actually be used in future
technology?" Even the astrophysicists who *are* prepared to dismiss this claim
can only do so on *theory* that places limits on the process (which may
actually be possible, though not at the scale illustrated in the claim) based
on (well established) theoretical properties of matter. Those same
astrophysicists will (or should) tell you that they cannot dismiss the
possibility of new theories emerging which make the "hyper-spatial antenna"
obviously practical.

In short: the joke is that the process is actually a valid claim, but as far as
we know it will only work at astronomical scales: well beyond practical means.
Now this guy owns the rights to make use of this concept for (50, 100?) years.
After that, if the concept *does* become practical through some radical new
physics, hyperspace communication will be public-domain. No person or
corporation or government can keep the cat in the bag.

BTW: a side joke is that the described model will make plants grow better. IT
IS A HALOGEN LIGHT BULB: DUH!

Brett Glass wrote:

> At 12:48 PM 3/22/2000 , Jeremy McMillan wrote:
>
> >This was a joke on the Patent Office.
>
> If it was, it's a criminal offense. It's not legal to file a "joke" patent;
> it's considered to be fraud.

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98. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Thu, 23 Mar 2000 10:26:12 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73145-2000.03.23-10.25.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We should be able to get hardware manufacturers' cooperation easily. It changes the business model of communication technology.

Currently people have to buy or rent or lease equipment *and* pay a *gatekeeper* toll to gain access to the public network. The gatekeeper limits the usefulness of the network and limits the number of nodes which limits the number of units the manufacturer can sell.

Using Tim Shephard's SS protocol, the network is in the public domain. All is needed is the FCC to set aside (and protect) some bandwidth for devices that conform to the protocol. Then the manufacturer can sell a wide range of devices in mass-market commodity numbers. It can be what Bluetooth *wants* to be, but WAY better.

I propose we design a basic Shephard SS node, patent it, and liscence it similarly to the GPL of Linux. That places the chip manufacturers at the pinnacle of the new market without having to share revenues with telephone companies and other value-subtracted middlemen.

Douglas Bradford wrote:

> Does Tim every drop by? Does anybody know how to get in touch with
> him.I'am still in the process
> of reading his thesis, from what I have read this could be the basis of
> some very interesting products.
>
> This sure sounds like a great way to get email messages through a
> intelligent, mulit-hop dynamic network
> where every user is also part of the network.
> Doug/WD6DGH
>
> At 02:05 PM 3/22/00 -0600, you wrote:
> >So is there a future for Shephard's SS protocol in TAPR projects? The chip
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> >I believe Tim also has software to simulate the performance of such a
> >network in
> >different scenarios. I think the stuff is *golden*.
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> >"Eric S. Johansson" wrote:
> >
> > > ----- Original Message -----
> > > From: "Jeremy McMillan" <mcmillan@cboe.com>
> > > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > > Sent: Wednesday, March 08, 2000 12:41 PM
> > > Subject: [ss] Re: a potentially compelling application?
> > >
> > > > I happen to believe that wireless should go the way of the Internet:
> > > > Multipath peer-to-peer network of intelligent repeaters (routers). I like
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99. [ss] Re: a potentially compelling application?

From: Douglas Bradford <DGBradford@worldnet.att.net>
Date: Thu, 23 Mar 2000 08:51:07 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73148-2000.03.23-10.46.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

YES!, Exactly what I was thinking, Good Ideas, in the true spirit of
Amateur Radio.
A community based network where everybody can gain access and each participant
forms another link in the network. The vehicle for doing this could be
TAPR. I would suggest
that the relatively uncrowded U-NII band could be used for non amateur
participants.
I guess they would have to monitored and filtered to maintain a FCC/Amateur
compliant system.

I like your ideas about using the GPL licenses, we could even base the
system software around
an embedded version of Linux. There is also www.opencore.org that could
provide the ASIC design
and distribution expertise. It seems like most of the problems are resolvable

"...tactics always degrade strategy..." -Frank Bethwaite

Doug WD6DGH

At 10:26 AM 3/23/00 -0600, you wrote:
>We should be able to get hardware manufacturers' cooperation easily. It
>changes
>the business model of communication technology.
>
>Currently people have to buy or rent or lease equipment *and* pay a
>*gatekeeper*
>toll to gain access to the public network. The gatekeeper limits the
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>Using Tim Shephard's SS protocol, the network is in the public domain. All is
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>mass-market commodity numbers. It can be what Bluetooth *wants* to be, but WAY
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>

>I propose we design a basic Shephard SS node, patent it, and liscence it
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> > >network in
> > >different scenarios. I think the stuff is *golden*.
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> > >"Eric S. Johansson" wrote:
> > >
> > > > ----- Original Message -----
> > > > From: "Jeremy McMillan" <mcmillan@cboe.com>
> > > > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > > > Sent: Wednesday, March 08, 2000 12:41 PM
> > > > Subject: [ss] Re: a potentially compelling application?
> > > >
> > > > > I happen to believe that wireless should go the way of the Internet:
> > > > > Multipath peer-to-peer network of intelligent repeaters
> > (routers). I like
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> > > > > proposed by Tim Shepard in 1996.
> > > > >
> > > > > Has everyone read that stuff? It basically designs the near/far
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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

100. [ss] Re: a potentially compelling application?

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Thu, 23 Mar 2000 12:23:00 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73153-2000.03.23-11.22.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

----- Original Message -----
From: "Jeremy McMillan" <mcmillan@cboe.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Thursday, March 23, 2000 11:26 AM
Subject: [ss] Re: a potentially compelling application?

> We should be able to get hardware manufacturers' cooperation easily. It
changes
> the business model of communication technology.
>
> Currently people have to buy or rent or lease equipment *and* pay a
gatekeeper
> toll to gain access to the public network. The gatekeeper limits the
usefulness of
> the network and limits the number of nodes which limits the number of
units the
> manufacturer can sell.

I have a rant/white paper that I'm working on in the background on how there exists a natural monopoly for last mile infrastructure and should be treated as such. A last mile infrastructure of this nature would allow one to have competition at the gatekeeper level and handle it as a real-time auction based on quality of service or some other metric.

> Using Tim Shephard's SS protocol, the network is in the public domain. All
is
> needed is the FCC to set aside (and protect) some bandwidth for devices
that
> conform to the protocol. Then the manufacturer can sell a wide range of
devices in
> mass-market commodity numbers. It can be what Bluetooth *wants* to be, but
WAY
> better.

it's not exactly in the public domain. The term "public domain" has a specific legal meaning referring to intellectual property ownership. It's more of a communal resource or a "commons" as it were. There needs to be some form of regulation, be it explicit fiat by a regulatory organization such as the FCC or a municipality or a market-based one such as local balance auctions settled between machines based on need and willingness to pay.

In a totally unregulated environment, the organization with the biggest purse wins and I would hate to see all of the local RF bandwidth be sucked up by some organization without compensating the other folks within range for the inconvenience.

Although, in a software based environment, one needs to remember that code is law. Which means whoever writes the code, writes the law.

>
> I propose we design a basic Shephard SS node, patent it, and liscence it
similarly
> to the GPL of Linux. That places the chip manufacturaers at the pinnacle
of the new
> market without having to share revenues with telephone companies and other
> value-subtracted middlemen.

I believe the Shepherd model is already patented by Tim himself although he probably doesn't own the patent anymore. He probably had to sign it away to

either MIT or venture capitalists.

however, this should not stop you from developing radios and software based
on the techniques outlined in his paper. Either people will license it on a
reasonable basis or you can publicize their refusal and give away the code
with a clear warning that violates the patent and should not be used... ;-)

and be aware however that his model does not eliminate the problem inherent
in half duplex radios which is that the end-to-end bandwidth drops
significantly for every hop. I believe it degrades by something like 1/n
where n is the number of hops. There needs to be some sort of full duplex
like operation where a relaying node can be transmitting the previous packet
while its receiving the current one. Think ethernet switches with store and
forward capability.

--- eric

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101. [ss] Re: a potentially compelling application?

From: Tom Genereaux <entropy@lawrence.ks.us>
Date: Thu, 23 Mar 2000 11:58:20 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73162-2000.03.23-12.00.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 23 Mar 2000, you wrote:
> YES!, Exactly what I was thinking, Good Ideas, in the true spirit of
> Amateur Radio.
> A community based network where everybody can gain access and each participant
> forms another link in the network. The vehicle for doing this could be
> TAPR. I would suggest
> that the relatively uncrowded U-NII band could be used for non amateur
> participants.
> I guess they would have to monitored and filtered to maintain a FCC/Amateur
> compliant system.
>
> I like your ideas about using the GPL licenses, we could even base the
> system software around
> an embedded version of Linux. There is also www.opencore.org that could
> provide the ASIC design
> and distribution expertise. It seems like most of the problems are resolvable
>
> "...tactics always degrade strategy..." -Frank Bethwaite

For an open source embedded solution that can be built today - Open
Core is a bit away from real hardware at this point - look at <a
href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/www.lart.tudelft.nl
"> the LART project.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

102. [ss] Re: a potentially compelling application?

From: "Scott C. Best" <sbest00@svpal.org>
Date: Fri, 24 Mar 2000 10:48:43 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73363-2000.03.24-12.48.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> This sure sounds like a great way to get email messages through a
> intelligent, mulit-hop dynamic network
> where every user is also part of the network.

        Forgive the question if it's way off base...would
this method be at all similar to the distributed packet radio
technology developed by Rooftop Communications, recently
acquired by Nokia?

-Scott

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103. [ss] Fwd: FHSS complete transceiver on 902

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 24 Mar 2000 12:52:53 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73365-2000.03.24-13.01.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Date: Sat, 18 Mar 2000 14:57:16 -0800
>To: wd5ivd@tapr.org
>From: Jim Shepherd <NVJims@desertlinc.com>
>Subject: FHSS complete transceiver on 902
>Mime-Version: 1.0
>Status:
>
>Hi Greg,
>   Check out the Microwave Journal for March 2000. On page 152 they have a
>product anouncement for a complete 100mW FHSS transceiver for about $100.
>
>More information is at www.worldwireless.com It is called "900 SS
>MicroHopper"
>
>Looks like all that is needed is to add an antenna and/or rf amp for longer
>communication ranges.
>
>Hope this is of interest.
>
>
>73, Jim N7WVZ in beautiful DN10cu...
>

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

104. [ss] RE: Fwd: FHSS complete transceiver on 902

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 27 Mar 2000 10:51:57 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73895-2000.03.27-09.54.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am looking into this, as it looks like a solutions to a problem that
just popped up at my place of work, hope to be able to give some
input on these devices soon...

> -----Original Message-----
> From: Greg Jones [SMTP:wd5ivd@tapr.org]
> Sent: Friday, March 24, 2000 13:53
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Fwd: FHSS complete transceiver on 902
>
> >Date: Sat, 18 Mar 2000 14:57:16 -0800
> >To: wd5ivd@tapr.org
> >From: Jim Shepherd <NVJims@desertlinc.com>
> >Subject: FHSS complete transceiver on 902
> >Mime-Version: 1.0
> >Status:
> >
> >Hi Greg,
> >   Check out the Microwave Journal for March 2000. On page 152 they
> have a
> >product anouncement for a complete 100mW FHSS transceiver for about $100.
> >
> >More information is at www.worldwireless.com It is called "900 SS
> >MicroHopper"
> >
> >Looks like all that is needed is to add an antenna and/or rf amp for
> longer
> >communication ranges.
> >

> >Hope this is of interest.
> >
> >
> >73, Jim N7WVZ in beautiful DN10cu...
> >
> -----
> Greg Jones, WD5IVD   Austin, Texas
> wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd
>
>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

105. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Mon, 27 Mar 2000 10:02:16 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73897-2000.03.27-10.02.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Eric S. Johansson" wrote:

> > Using Tim Shephard's SS protocol, the network is in the public domain. All
> is
> > needed is the FCC to set aside (and protect) some bandwidth for devices
> that
> > conform to the protocol. Then the manufacturer can sell a wide range of
> devices in
> > mass-market commodity numbers. It can be what Bluetooth *wants* to be, but
> WAY
> > better.
>
> it's not exactly in the public domain. The term "public domain" has a
> specific legal meaning referring to intellectual property ownership. It's
> more of a communal resource or a "commons" as it were. There needs to be
> some form of regulation, be it explicit fiat by a regulatory organization
> such as the FCC or a municipality or a market-based one such as local
> balance auctions settled between machines based on need and willingness to
> pay.

When I said network, I meant "protocol specification". AFAIK, bluetooth protocol
requires liscencing...

> In a totally unregulated environment, the organization with the biggest
> purse wins and I would hate to see all of the local RF bandwidth be sucked
> up by some organization without compensating the other folks within range
> for the inconvenience.

Not necessarily so. The Internet handles this gracefully: if someone breaks
protocol (ie. least-energy routing requirements) all others can "black-hole"
them by ignoring their loud, rude transmissions. Their overpowered station
becomes an expensive marginally effective jammer.

> Although, in a software based environment, one needs to remember that code
> is law. Which means whoever writes the code, writes the law.

Anyone can write competing law, and we all choose what laws we conform to
a-la-carte.

> >
> > I propose we design a basic Shephard SS node, patent it, and liscence it
> similarly
> > to the GPL of Linux. That places the chip manufacturaers at the pinnacle
> of the new
> > market without having to share revenues with telephone companies and other
> > value-subtracted middlemen.
>
> I believe the Shepherd model is already patented by Tim himself although he
> probably doesn't own the patent anymore. He probably had to sign it away to
> either MIT or venture capitalists.
>
> however, this should not stop you from developing radios and software based
> on the techniques outlined in his paper. Either people will license it on a

> reasonable basis or you can publicize their refusal and give away the code
> with a clear warning that violates the patent and should not be used... ;-)
>
> and be aware however that his model does not eliminate the problem inherent
> in half duplex radios which is that the end-to-end bandwidth drops
> significantly for every hop. I believe it degrades by something like 1/n
> where n is the number of hops. There needs to be some sort of full duplex
> like operation where a relaying node can be transmitting the previous packet
> while its receiving the current one. Think ethernet switches with store and
> forward capability.

I think this is necessary given his suggestion of a "rake reciever." There have got to be gobs of commodity chips out there to do frame buffering for ethernet switches. If your published listening schedule doesn't overlap the final destination's listening schedule when you recieve a packet for him, then you would need to buffer it until you get to a time that you know he is listening but you are not listening (hence others will not step on your transmission). Even if you get a packet and can immediately forward it (cut-through style) on another channel, you would need time to decide *which* channel to forward to, which would require buffering.

Full duplex would be handled by having a single fifo for each channel. If you want full duplex, communicate on separate forward and reverse channels. You cannot transmit and recieve simultaneously on the same channel anyways.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

106. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Mon, 27 Mar 2000 10:12:05 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73900-2000.03.27-10.11.36--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

One can't be sure. The Shepard protocol is transparent. It's published. Rooftop's stuff is grey-box with a limited API.

It looks like they grok the fact that the multipath least-energy routing stuff is a MAC layer protocol, and can be implemented on any kind of radio link, baseband, SS, whatever.

"Scott C. Best" wrote:

> > This sure sounds like a great way to get email messages through a
> > intelligent, mulit-hop dynamic network
> > where every user is also part of the network.
>
>   Forgive the question if it's way off base...would
> this method be at all similar to the distributed packet radio
> technology developed by Rooftop Communications, recently
> acquired by Nokia?

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

107. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Mon, 27 Mar 2000 10:14:38 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73902-2000.03.27-10.13.42--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I wonder if they realize that this same technology could be used in competition with Bluetooth's short-range indoor connectivity too?

"Scott C. Best" wrote:

> > This sure sounds like a great way to get email messages through a
> > intelligent, mulit-hop dynamic network
> > where every user is also part of the network.
>
>   Forgive the question if it's way off base...would
> this method be at all similar to the distributed packet radio
> technology developed by Rooftop Communications, recently

> acquired by Nokia?

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

108. [ss] Re: a potentially compelling application?

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 28 Mar 2000 00:35:58 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-73979-2000.03.27-18.32.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> > > mass-market commodity numbers. It can be what Bluetooth *wants* to be,
but
> > WAY
> > > better.

Bluetooth is a cable replacement technology for very limited range
(typically less than 10 meters) for a tiny number of devices (no more than 8
active at any time, usually fewer).

Shepherd's system is designed to create a functional network of unlimited
size.

Opposite ends of the usage model.

> When I said network, I meant "protocol specification". AFAIK, bluetooth
protocol
> requires liscencing...

To use the Bluetooth logo requires that you "certify" your implementation.

Enjoy!

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

109. [ss] info

From: avraham kurtz <kurtz@beitza.jct.ac.il>
Date: Tue, 28 Mar 2000 13:10:10 +0200 (IST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74072-2000.03.28-05.03.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi My name is A Kurtz I'm new here and to the subject of ss.
 I'm doing a project for my degree in which I need to design and build a
ss system.I need help on gathering general basic data of ss.
 I'm having problems undestanding the despreading concept(cross
corraltion). If some one could send my information I would be grateful.
 Thank You

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

110. [ss] Re: info

From: Derek Lassen <kn6td@clubnet.net>
Date: Tue, 28 Mar 2000 03:33:41 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74075-2000.03.28-05.41.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The idea is to add a trial despreading code to a target symbol stream and
keep statistics on how much the signal rises out of the noise as you change
the spreading code.

Since the spreading code sequence is known, and you are just looking for
the offset within it, one technique is to have three concurrent despreaders

working. The first one is using a early version of the code(T-1), the
second is using a late version (T+1), and the third uses an on time version
(T). T is the offset in chirps, from the start of the epoch (length of time
for the PRN to recycle). The clock rate is a little faster (or much faster
if you can mangae it), than the actual symbol stream.

At some point in time, the early despreader will see a fall, the on time
despreader will see a peak, and the late despreader will see a rise. At
this time, you lock the despread clock to the symbol stream clock, and you
are in synch.

The early / on time / late decoders drive a feedback loop like a PLL to
generate the decode clock.

You can build the decoders in analog (mixers and PLLs), In digital, or if
you have the processor poop - in firmware (ie DSP).

Hope this helps.

73 de KN6TD

(S) Derek

At 01:10 PM 3/28/00 +0200, you wrote:
>Hi My name is A Kurtz I'm new here and to the subject of ss.
> I'm doing a project for my degree in which I need to design and build a
>ss system.I need help on gathering general basic data of ss.
> I'm having problems undestanding the despreading concept(cross
>corraltion). If some one could send my information I would be grateful.
> Thank You
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

111. [ss] Re: a potentially compelling application?

From: Jeremy McMillan <mcmillan@cboe.com>
Date: Tue, 28 Mar 2000 10:33:55 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74120-2000.03.28-10.33.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lyle Johnson wrote:
>
> > > > mass-market commodity numbers. It can be what Bluetooth *wants* to be,
> but
> > > > WAY
> > > > better.
>
> Bluetooth is a cable replacement technology for very limited range
> (typically less than 10 meters) for a tiny number of devices (no more than 8
> active at any time, usually fewer).
>
> Shepherd's system is designed to create a functional network of unlimited
> size.
>
> Opposite ends of the usage model.
>

Shepherd wasn't interested in size, but rather *node*density*. The
protocol is designed, using variable xmit power least-energy routing, so
that the network can operate with lots of nodes in very close vicinity,
and it can accomodate long-range links requiring the transmitter's
maximum power.

Size is either geographic separation of nodes, or number of nodes.

Density is the number of nodes (transcievers) per geographic unit.

The radios are designed to be *able* to transmit to anyone within range,
but prefer transmitting to the nearest forwarder that can reach the

destination node.

Shepherd's protocol, the way I see it, spreads across the whole "usage model" you refer to. To make these radios work like Bluetooth devices, just give them smaller, lower powered transcievers. Have one in your PDA. Have one in your PC. Have another in your car with a longer-range transciever, and a high-power base unit at home. Counties could operate towers to reach neighboring counties using highly directional antennae. Densely populated counties could bridge traffic across land-based fiber.

It's like the Internet, but better. Actually, it *IS* the Internet. It's just evolving. Universal connectivity has always been the "Manifest Destiny" of the Internet.

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112. [ss] Re: info

From: "M.A.PINFOLD" <xtr980020@xtra.co.nz>
Date: Wed, 29 Mar 2000 13:21:58 +1200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74185-2000.03.28-19.20.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I see on the dicussion group a number of times ,people new to SS wanting information and help on topics of SS. Can I recommend to anyone who like me is "new" to Spread spectrum and not professionally involved but wants to learn the basic principles and techniques of DSSS and FH etc and that is to to buy,beg,borrow ,steal,theive,extort a copy of Robert Dixons most excellent book "spread Spectrum systems" Second Edition Robert C Dixon, Wiley Interscience, ISBN 0-471-88309-3. which I hate to say may be out of print ?????? perhaps tapr could organise to sell it?? Id buy a copy!! wasnt there a third edition !!?? I call it the SS bible and is well worth having. I would love to obtain a copy as I begrudgingly had to give the loaned copy back!! another article to get hold of for added practical example is "Voice link over Spread Spectrum radio by James Vincent G1PVZ in the english monthly magazine called "Electronics and Wireless world" sept and oct 1993 hope that helps someone   regards Mike ZL1BTB

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

113. [ss] Re: info

From: Jeff King <jeff@aerodata.net>
Date: Tue, 28 Mar 2000 20:46:41 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74187-2000.03.28-19.46.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"M.A.PINFOLD" wrote:

> buy,beg,borrow ,steal,theive,extort a copy of Robert Dixons
> most excellent book "spread Spectrum systems" Second Edition Robert C
> Dixon, Wiley Interscience, ISBN 0-471-88309-3. which I hate to say may
> be out of print ??????

Second edition is, there is a third edition, which I think(?) is the same book.
See:
http://www.amazon.com/exec/obidos/ASIN/0471593427/qid=954294050/sr=1-9/103-4438735-7639067

Let me know if it looks like it, I had the first edition some time ago (but loaned it out) but no longer have it.

-Jeff

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

114. [ss] Re: info

From: "jmelvin@infopath.com" <jmelvin@infopath.com>
Date: Tue, 28 Mar 2000 23:12:15 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>

Message-ID: <LYR6751-74238-2000.03.29-01.14.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

3rd Edition of Bob Dixon's book has new chapters:
- 1992 Report on Propagation & Interference Test Results
        from Omnipoint Corp. where he was Chief Scientist.
        (Omnipoint just merged w/ Voicestream)
- Part II: Commercial Applications of SSSystems.
And is Copyright 1994
73, - Jay Melvin, WA6SBO@ARRL.NET

Jeff King wrote:
>
> "M.A.PINFOLD" wrote:
>
> > buy,beg,borrow ,steal,theive,extort a copy of Robert Dixons
> > most excellent book "spread Spectrum systems" Second Edition Robert C
> > Dixon, Wiley Interscience, ISBN 0-471-88309-3. which I hate to say may
> > be out of print ??????
>
> Second edition is, there is a third edition, which I think(?) is the same book.
> See:
> http://www.amazon.com/exec/obidos/ASIN/0471593427/qid=954294050/sr=1-9/103-4438735-7639067
>
> Let me know if it looks like it, I had the first edition some time ago (but loaned
> it out) but no longer have it.
>
> -Jeff
>
> ---
> You are currently subscribed to ss as: wa6sbo@arrl.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

115. [ss] RE: ERP limits on hyper-spatial antenna?

From: Brett Glass <brett@lariat.org>
Date: Wed, 29 Mar 2000 16:30:07 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74325-2000.03.29-17.30.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:16 AM 3/23/2000 , Jeremy McMillan wrote:

>BTW: a side joke is that the described model will make plants grow better. IT
>IS A HALOGEN LIGHT BULB: DUH!

In the patent, the "inventor" says that in his preferred embodiment the bulb
is fully covered. He claims that the plants grow better not due to light from
the bulb but due to "radiation from another dimension."

I almost snorted my morning coffee right out my nose when I read that
line.

This patent is worth perusing just for its humor value.

--Brett

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

116. [ss] WaveNet IP

From: mdmiller@fastlane.net
Date: Fri, 31 Mar 2000 07:35:17 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74593-2000.03.31-07.37.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am currently testing a FHSS product that is essentially a router with
10BT on one end and a radio (2.4 GHz +15 to +24 dBm) on the other end. It
is made by Multipoint networks and is called WaveNet IP. They claim up to
20 km typical range and data rates at 50 IP packets per second of size 1500
bytes or 250 IP packets per second of size 300 bytes or smaller. My units
are currently in the lab, but I will be taking them to the field in
May. These are not inexpensive units, but so far I am impresses with the

functionality.

Multipoint's web site is http://www.multipoint.com/ but has been under
construction for quite some time. You go to
http://www.emsg.com/prod06.htm/ to see a picture of the router and antenna.

  This product is in the 3K-5K per unit range. I understand they are going
to move up into the 5 GHz band soon.

The word on the street is that most wireless LANs are moving out of the 900
MHz ISM band because of interference, I guess there are too many devices
there now.

I am anxiously awaiting the TAPR product!

Mark Miller
N5RFX

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

117. [ss] Proxim Q's

From: Bob Lorenzini <hwm@newportharbornet.com>
Date: Fri, 31 Mar 2000 07:11:18 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74611-2000.03.31-09.11.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm somewhat confused about the symphony and wavelan2 products. Is is
possible to attach an external ant to the symphony pcmcia card like
the wavelan2? Will sympony and wavelan2 talk to each other?

Bob

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

118. [ss] 2.5 GHz rs232 modems

From: "M.A.PINFOLD" <xtr980020@xtra.co.nz>
Date: Sat, 01 Apr 2000 07:59:08 +1200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74668-2000.03.31-13.57.46--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi there just peddling my barrow here but I think they are a cheap buy
here in New Zealand dont ask me about the real Techo specifications I
can just give you what I have on the box and the fact Ive been inside
them .They use the triquint 2.5 Ghz T/R 100mW rf Preamp chip as the
final output device. I have had 8 Kms line of sight between them using a
tubular radiator feed horn and four foot paraclipse sat TV dishes, for a
remote internet access point. but they are well priced ?? about US$280 a
pair . I import them as a sideline (I pull teeth for a living someones
got to do it ,to all you guys out there that dont look after them)
check out www.amalgamate2000.com go to contents ,components,scroll
down to the bottom and click on rs 232 there's the data and picture
.   cheers mike ZL1BTB

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

119. [ss] Re: Proxim Q's

From: Jeff King <jeff@aerodata.net>
Date: Fri, 31 Mar 2000 16:03:13 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74673-2000.03.31-15.03.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is a good hardware hack site for the Symphony:

http://www.gbonline.com/~multiplx/wireless/

There is a section on the antenna connector.

Can't help you on the wavelan2, but heard some good stuff about
it.

-Jeff

Bob Lorenzini wrote:

> I'm somewhat confused about the symphony and wavelan2 products. Is is
> possible to attach an external ant to the symphony pcmcia card like
> the wavelan2? Will sympony and wavelan2 talk to each other?
>
> Bob
>
> ---
> You are currently subscribed to ss as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

120. [ss] Re: Proxim Q's

From: Jeff King <jeff@aerodata.net>
Date: Fri, 31 Mar 2000 16:14:17 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74674-2000.03.31-15.14.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Opps.... missed the PCMCIA part.
(the guide I cited only covers the ISA card)

The antenna on the PCMCIA proxim IS detachable, but appears to be a proprietary
connector. I imagine you could trash the detachable antenna, and convert it into a
connector/ attach a pigtail (dremal motor tool experience).

-Jeff

Jeff King wrote:

> Here is a good hardware hack site for the Symphony:
>
> http://www.gbonline.com/~multiplx/wireless/
>
> There is a section on the antenna connector.
>
> Can't help you on the wavelan2, but heard some good stuff about
> it.
>
> -Jeff
>
> Bob Lorenzini wrote:
>
> > I'm somewhat confused about the symphony and wavelan2 products. Is is
> > possible to attach an external ant to the symphony pcmcia card like
> > the wavelan2? Will sympony and wavelan2 talk to each other?
> >
> > Bob
> >
> > ---
> > You are currently subscribed to ss as: jeff@aerodata.net
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
> ---
> You are currently subscribed to ss as: jeff@aerodata.net
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---
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121. [ss] Re: Proxim Q's

From: Bob Lorenzini <hwm@newportharbornet.com>
Date: Fri, 31 Mar 2000 13:33:36 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-74677-2000.03.31-15.33.31--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

On Fri, 31 Mar 2000, Jeff King wrote:

> Here is a good hardware hack site for the Symphony:

That is what got me going on the Proxims. It looks like they both use
a snap on antenna but the rangelan2 has an external as well.

Bob

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122. [ss] Re: Proxim Q's

From: Bob Lorenzini <hwm@newportharbornet.com>
Date: Fri, 31 Mar 2000 13:35:31 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Message-ID: <LYR6751-74678-2000.03.31-15.35.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, 31 Mar 2000, Jeff King wrote:

> Opps.... missed the PCMCIA part.
> (the guide I cited only covers the ISA card)
>
> The antenna on the PCMCIA proxim IS detachable, but appears to be a proprietary
> connector. I imagine you could trash the detachable antenna, and convert it into a
> connector/ attach a pigtail (dremal motor tool experience).

That what I wanted to know. Thanks!

Bob

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April 2000

Original source file: ss.0004
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0004

1. [ss] Looking for Part 15 Solution

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 11 Apr 2000 08:18:20 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76754-2000.04.11-07.21.10--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Folks:
I have had a question dropped on me, and figured that this was
the best place to ask it.

A customer of mine needs to finish several "last mile" data links
these are for Motorola RD-Lap systems, seems the local telco
no longer really understands how to do analogue lease lines,
the customer has had a real time trying to get the telco (Bell
South) to get these lines to work properly, the modems being
used are UDS modems at 14k4 so it is not blazing speed.

Anyhow, the customer is interested in replacing these lease
lines with part 15 links, most of which would be 10 miles or
less in length, I see some good information on stuff that is being
done with some of the part 15 stuff.

What we are thinking is something we can plug into the router
at the office nearest the RD-Lap base station site and then run
the data up to the RD-Lap site, come out of a small terminal server
with the serial data stream to the RD-Lap base station controller,
and thereby get rid of the lease line and the problems that it is
causing in terms of lack of knowledge by the provider.

The customer already has the RD-Lap RNC talking to a DSU/CSU
from Atlanta to their Chattanooga office, at that office there is
another DSU/CSU that talks to the UDS modem and then up the
hill to the radio site, we want to eliminate that lease line up the
hill, and go wireless.

They are looking for something low cost to test with then if it works
reasonably well they will spring for something probably more expensive.

The lesson learned here is that the telcos appear to be loosing the
expertise to handle analogue lines, that was told us directly by the
installer who said he could do a digital line because it was "easy"

He told us that the "old analogue guys" were almost gone and no one
really was that familiar with those types of leased lines, go figure.. B-b

---
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2. [ss] RE: Looking for Part 15 Solution

From: Dirk Koopman <djk@tobit.co.uk>
Date: Tue, 11 Apr 2000 14:37:08 +0100 (BST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76761-2000.04.11-08.37.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 11-Apr-2000 Hast, Chuck wrote:
> Folks:
> I have had a question dropped on me, and figured that this was
> the best place to ask it.
>
> A customer of mine needs to finish several "last mile" data links
> these are for Motorola RD-Lap systems, seems the local telco
> no longer really understands how to do analogue lease lines,
> the customer has had a real time trying to get the telco (Bell
> South) to get these lines to work properly, the modems being
> used are UDS modems at 14k4 so it is not blazing speed.

Hum... I thought that in the US RD-LAP was generally run in 25Khz channels
and at 19K2.

>
> Anyhow, the customer is interested in replacing these lease
> lines with part 15 links, most of which would be 10 miles or
> less in length, I see some good information on stuff that is being
> done with some of the part 15 stuff.
>
> What we are thinking is something we can plug into the router
> at the office nearest the RD-Lap base station site and then run
> the data up to the RD-Lap site, come out of a small terminal server
> with the serial data stream to the RD-Lap base station controller,
> and thereby get rid of the lease line and the problems that it is
> causing in terms of lack of knowledge by the provider.
>
> The customer already has the RD-Lap RNC talking to a DSU/CSU
> from Atlanta to their Chattanooga office, at that office there is
> another DSU/CSU that talks to the UDS modem and then up the
> hill to the radio site, we want to eliminate that lease line up the
> hill, and go wireless.
>
> They are looking for something low cost to test with then if it works
> reasonably well they will spring for something probably more expensive.

The trade off you have to make here is whether the reliability that you require can obtained from a radio system that has no protected sprectrum, is filling up exponentially with uncontrolled numbers of users and is subject to all the usual atmospheric effects that radio at these frequencies has or to bite the bullet and go with wire/fibre.

I have a system out in the field that controls ambulances which has protected spectrum, telco installed radio links which is sufficiently unreliable to cause the customer to have considered suing said telco. That is supposed to be a digital over radio link solution (which suffered constant syncronisation problems [if anyone is interested]) - it has been recently fixed (finally). However, it still suffers from extreme weather effects - which no-one can do anything much about (but is a lot rarer).

My experience suggests that the way forward is to avoid radio links like the plague if you want reliability. If all the telco can do is lay digital lines then why not shove in a 56/64Kb line on copper and stick a single port terminal server on each end and use that?

> The lesson learned here is that the telcos appear to be loosing the
> expertise to handle analogue lines, that was told us directly by the
> installer who said he could do a digital line because it was "easy"

> He told us that the "old analogue guys" were almost gone and no one
> really was that familiar with those types of leased lines, go figure.. B-b

He'll be telling you next that installing the local loop on a new analogue telephone is "difficult"!

Dirk G1TLH
--
Dirk-Jan Koopman, Tobit Computer Co Ltd
At the source of every error which is blamed on the computer you will find at least two human errors, including the error of blaming it on the computer.

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3. [ss] RE: Looking for Part 15 Solution

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 11 Apr 2000 13:37:36 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76790-2000.04.11-12.40.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My comments below...

> -----Original Message-----
> From: Dirk Koopman [SMTP:djk@tobit.co.uk]
> Sent: Tuesday, April 11, 2000 09:37
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: Looking for Part 15 Solution

>
>
> On 11-Apr-2000 Hast, Chuck wrote:
>
        [Hast, Chuck] cut out a chunk here...
> > South) to get these lines to work properly, the modems being
> > used are UDS modems at 14k4 so it is not blazing speed.
>
> Hum... I thought that in the US RD-LAP was generally run in 25Khz channels
> and at 19K2.
>
        [Hast, Chuck] Yes where they are still available the channels are
25khz and
        19k2... This particular system is UHF and the above applies. The
wireline links
        back to the RNC are 14k4 UDS modems.
> >
> > Anyhow, the customer is interested in replacing these lease
>
        Cut, Cut...
> > They are looking for something low cost to test with then if it works
> > reasonably well they will spring for something probably more expensive.
>
> The trade off you have to make here is whether the reliability that you
> require can obtained from a radio system that has no protected sprectrum,
> is
> filling up exponentially with uncontrolled numbers of users and is subject
> to
> all the usual atmospheric effects that radio at these frequencies has or
> to
> bite the bullet and go with wire/fibre.
>
        Yes this is one of the questions, several of these sites are
somewhat
        remote or in small towns, so I am not sure just how congested the
part
        15 spectrum is out in those areas (probably others with similar
ideas though)

> I have a system out in the field that controls ambulances which has
> protected
> spectrum, telco installed radio links which is sufficiently unreliable to
> cause the customer to have considered suing said telco. That is supposed
> to
> be a digital over radio link solution (which suffered constant
> syncronisation
> problems [if anyone is interested]) - it has been recently fixed
> (finally).
> However, it still suffers from extreme weather effects - which no-one can
> do
> anything much about (but is a lot rarer).
>
> My experience suggests that the way forward is to avoid radio links like
> the
> plague if you want reliability. If all the telco can do is lay digital
> lines
> then why not shove in a 56/64Kb line on copper and stick a single port
> terminal server on each end and use that?
>
        That is actually what I told them I thought they should do, and be
done
        with it, particularly given the comments from the telco guy as
stated
        below.
>
>
> > The lesson learned here is that the telcos appear to be loosing the
> > expertise to handle analogue lines, that was told us directly by the
> > installer who said he could do a digital line because it was "easy"
>
> > He told us that the "old analogue guys" were almost gone and no one
> > really was that familiar with those types of leased lines, go figure..
> B-b
>
> He'll be telling you next that installing the local loop on a new
> analogue telephone is "difficult"!
>
        I started to ask him that question, but thought I would hold off,

the
        customer had given him enough grief, see part of the problem was
        that said lease line in going from office to tower passed through
two
        CO's and according to the telco guy each CO had a similar box on
        the end of each line for a total of 6 boxes, he said that each box
had
        to be adjusted (I think setting up roll off or whatever) and that
there
        was not that many people who knew how to set up that many of them
        in series. He said that the digital lines were easy to set up, but
that he
        really was not that familiar with that type of equipment..

>
>

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4. [ss] RE: Looking for Part 15 Solution

From: Tony Balga <Tony@trillion21.com>
Date: Tue, 11 Apr 2000 12:54:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76791-2000.04.11-12.48.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We have point to point eithernet radios that will go 20+ miles

http://www.trillion21.com

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5. [ss] Re: Looking for Part 15 Solution

From: Jeff King <jeff@aerodata.net>
Date: Tue, 11 Apr 2000 14:06:13 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76796-2000.04.11-13.15.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Hast, Chuck" wrote:

>
> South) to get these lines to work properly, the modems being
> used are UDS modems at 14k4 so it is not blazing speed.
>
> Anyhow, the customer is interested in replacing these lease
> lines with part 15 links, most of which would be 10 miles or
> less in length,

FreeWave   http://www.freewave.com

Basically looks like a long piece of cable, no routing, but if you just
hooking together via landline modem anyways, thats what you want,
right?

10 miles is a piece of cake if its LOS. I've used them up to 12 miles,
and I know others that have gone farther then that.

$700 if you ask for the OEM board, and act like your a OEM. Otherwise
they are $1250 a side. You need two.

I've used a comet verticle, Olde Antenna lab corner reflector and a directive
systems loop yagi. FreeWave sells antennas also that are certified so
you can stay fully part 15 compliant, if your worried about that.

But don't underestimate the line of sight thing, real important. If you in a
flatland, you'll need a high tower, which might make the project
unrealistic. But if you can see it, you (almost always) will be able to
work it with the FreeWaves.

Good luck

-Jeff wb8wka

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6. [ss] Re: Looking for Part 15 Solution

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 11 Apr 2000 14:45:42 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76803-2000.04.11-13.48.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thank you Jeff, actually most of these sites are remote
offices, the circuits from the RNC to the office are T1's.

They have a CSU/DSU that they plug into and that talks
to a T1 using a Ethernet connection, on the far end it is
the same except that right now the go out of the CSU/DSU
as a RS-232 connect to the UDS modem, if we go to
wireless we could use wireless Ethernet type devices,
and put the CSU/DSU up at the tower, exiting from it
to the BSC.

The solution below would most certainly work though,
we would just replace the UDS modems with the Free
Wave devices. The test site is in Chattanooga, the tower
is up on Lookout Mountain and the office is in the valley.

You can see the tower site from the roof of the office.

> -----Original Message-----
> From: Jeff King [SMTP:jeff@aerodata.net]
> Sent: Tuesday, April 11, 2000 14:06
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Looking for Part 15 Solution
>
>
>
> FreeWave   http://www.freewave.com
>
> Basically looks like a long piece of cable, no routing, but if you just
> hooking together via landline modem anyways, thats what you want,
> right?
>
> 10 miles is a piece of cake if its LOS. I've used them up to 12 miles,
> and I know others that have gone farther then that.
>
> $700 if you ask for the OEM board, and act like your a OEM. Otherwise
> they are $1250 a side. You need two.
>
> I've used a comet verticle, Olde Antenna lab corner reflector and a
> directive
> systems loop yagi. FreeWave sells antennas also that are certified so
> you can stay fully part 15 compliant, if your worried about that.
>
> But don't underestimate the line of sight thing, real important. If you in
> a
> flatland, you'll need a high tower, which might make the project
> unrealistic. But if you can see it, you (almost always) will be able to
> work it with the FreeWaves.
>
> Good luck
>
>
> -Jeff wb8wka
>
>
>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com

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---
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7. [ss] Re: Looking for Part 15 Solution

From: Jeff King <jeff@aerodata.net>
Date: Tue, 11 Apr 2000 15:00:09 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76809-2000.04.11-14.10.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

"Hast, Chuck" wrote:

> They have a CSU/DSU that they plug into and that talks
> to a T1 using a Ethernet connection, on the far end it is
> the same except that right now the go out of the CSU/DSU
> as a RS-232 connect to the UDS modem, if we go to
> wireless we could use wireless Ethernet type devices,
> and put the CSU/DSU up at the tower, exiting from it
> to the BSC.

Well, remember this. Typically the faster you go, the less
range you get. The FreeWave over the air rate is actually
173kbaud, that way the can "kinda" simulate full duplex
at 115kbaud. The serial rate on a FreeWave can be set
from ~1200baud to 230kbaud (a hidden feature, hit
'0' as the baud rate selection).

I get about 10kbytes a second on a FTP using one of them.

Now, I can go on and on on how the FreeWave is over
priced, but thats what they charge. The have some substantial
discounts if you buy in volume, but that doesn't help you.

If you can actually SEE the site, then some of the 2.4ghz
units might work well too. Just keep a tight antenna
pattern if your in a urban area.. I think the FCC rules are more
liberal on 2.4ghz also for ERP.

Good luck.

-Jeff

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8. [ss] Re: Looking for Part 15 Solution

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Wed, 12 Apr 2000 07:27:32 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-76924-2000.04.12-06.30.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As a bit more information, one thing I forgot, the data link
between the RNC and the BSC is synchronous, so these
devices if they are RS-232 must handle synch data rather
than asynch... B-]

Modem data rate is 14k4 (this is the data rate between RNC
and BSC, the over the air data rate is 19k2, but there is
overhead for error correction and other stuff that makes up
the difference).

The CSU/DSU and some terminal servers have no problem
with this but so far what I have seen from the wireless RS-232
products is async data.

The wireless Ethernet stuff looks better and better all the time,
that will just plug right into the router that the T1 terminates
into and out we go to the BSC at the tower, which will talk to
the other end using another router/TS.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Re: Looking for Part 15 Solution

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Thu, 13 Apr 2000 21:54:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-77389-2000.04.13-21.54.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Nothing personal against the gentlemen who asked for input about
part 15 wireless linking for his customers.. however may I suggest
you check this list for help;
http://isp-lists.isp-planet.com/isp-wireless/archives/

I'd like to read more about what hams are doing at higher power
levels converting/using these units for part 97 use.

Steve Lampereur, KB9MWR
Low cost wireless network http://www.dct.com/~multiplx/wireless

PS: please contact me if you have buildt your own amp for 2.4 GHz

---
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10. [ss] (to administrator) re-subscribe

From: Anton Shepetko <anton@boxer.impar.com>
Date: Fri, 14 Apr 2000 12:15:40 +0300 (EEST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-77432-2000.04.14-05.13.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello, can you change my subscribed e-mail :Tosha@oberon.pfi.lt
to Anton@boxer.impar.com, or tell me how can I do that.

        Thank you anyway,   Anton.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Simple Ultra Wide Band Radio ?

From: tv@juno.com
Date: Sat, 15 Apr 2000 20:14:06 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-77806-2000.04.15-22.17.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is there anyone on this list who has experimented with impulse radio ?

After looking through the patents by Fullerton, McEwan, and other listed
at:
http://www.aetherwire.com/CDROM/General/numbers.html
it seems to me that building a basic utra-wide-band impulse radio might
be quite
simple and inexpensive. Not nearly as exotic as some people seem to want
to make it.

An impulse transmitter can be as simple as a pulsed transistor driven by
the proper train of pulses. McEwan has a patent for a fast MOSFET switch
#5,332,938. Other design use a push-pull type circuit like an H-bridge.

As far as receivers go, check out patent #5,345.471 by McEwan (an
engineer who Livermore Labs), it shows several receivers made of op-amps
with a simple diode detector. The receiver really just an integrator and
and amplifier.
The receiver works by adding (or subtracting) an incomming pulse train
from the antenna to a locally generated pulse train that matches the
transmitted pattern. The pattern could be a simple equally spaced pulse
train, or a complex psuedo random pattern.

An easy way to look up this patent (or others) is on the IBM patent
database at:

http://www.patents.ibm.com/details?&pn=US05345471__

To send digital data the transmitter shifts between one of two patterns or simply shifts the timing of the pattern slightly. The receiver would compare two corelated patterns using a comparator to recover the 0's and 1's.

In many ways UWB radios are about as simple as tuned radio frequency receivers or even simpler, except for the pn-codes and corelator. This seems like something hams should be playing with. I am getting tired of waiting for something to be available commercially. I would like to try make something myself.

Seems like you might be able to build an impulse radio for about $10 or $20 worth of parts. Maybe a PIC microcontroller chip could control the pulse train by momentarily "tweeking" the frequency of a master oscillator that runs a sequencer that could be something as simple as some XOR gates and a shift register. The PIC would somehow detect when things were in phase.

I am no expert on SS radios. What do you experts think ?

How about an UWB radio from common parts that a high school kid could build ?

Thanks, Tim. WA6KJL

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: Simple Ultra Wide Band Radio ?

From: "Jeff Millar" <jeff@wa1hco.mv.com>
Date: Sun, 16 Apr 2000 12:14:08 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-77932-2000.04.16-11.18.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The KK7B direct conversion (zero IF) receiver makes a fine UWB receiver, see http://www.bright.net/~kanga/kanga/kk7b.htm...although they don't know anything about the UWB nature of their kits.

These receivers have a mixer at the front end that takes in RF, mixes it with the LO and generates audio. To use them as impulse receivers, simply use an impulse in place of the sine wave IF. "Simply" contains a host of fun issues.

To understand how this works, think of the mixer in the time domain. Look at the schematic of minicircuits mixer, it consists of a diode ring and two transformers. The LO causes the polarity of the incoming signal to switch and appear on the IF port. An impulse on the input consists of a positive half cycle, a zero crossing, and a negative half cycle. If a matching impulse on the IF cause the polarity to switch just at the zero crossing of the incoming impulse, then the IF has a DC component proportional to the amplitude and phase of the incoming signals. Now pulse position modulate the transmitter impulse to slide the zero crossing around and the modulation appears on the IF and out to the speakers.

I've done this and it works great. The practical problems arise when generating the impulse at the receiver. The pulse train needs a pseudo random position sequence to eliminate lines in the output spectrum. The receiver has to hunt through all the time between impulses to find and acquire the pulse train...equivalent to processing gain in spread spectrum sense. Probably best to use GPS time plus some knowledge of the path length to aid acquisition.

The processing gain of this system becomes impulse BW/modulation BW. For example, a VHF UWB system has 100 MHz BW, and uses 10 KHz modulation resulting in 40 dB processing gain...that's a lot of hunting around during acquisition. With 100 Mhz BW, the impulses last for about 10 ns and modulation moves the impulses around by less than 5 ns. The 10 KHz modulation means a 10 ns impulse every 100 usec.

My idea for a transmitter (never tried) is to use a TTL bus driver part.
74FCT244, for example, has <1 ns edge speed and eight 64 ma drivers. The
output impedance is low, so matching to an antenna is not so efficient.
but it's very simple. Suggest using it push pull, tying 4 output to
one side of a bowtie antenna and 4 to the other side.

Real impulses never look textbook because the antenna and other components
resonate a bit.   That's ok, just use a matching time domain wave shape
at the receiver.

UWB is probabaly not the best term for this technology. How about

    Time Domain Signals, Time Domain Rx, Time Domain Tx, etc?

jeff
wa1hco

----- Original Message -----
From: <tv@juno.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Saturday, April 15, 2000 11:14 PM
Subject: [ss] Simple Ultra Wide Band Radio ?

>
> Is there anyone on this list who has experimented with impulse radio ?
>
> After looking through the patents by Fullerton, McEwan, and other listed
> at:
> http://www.aetherwire.com/CDROM/General/numbers.html
> it seems to me that building a basic utra-wide-band impulse radio might
> be quite
> simple and inexpensive. Not nearly as exotic as some people seem to want
> to make it.
>
> An impulse transmitter can be as simple as a pulsed transistor driven by
> the proper train of pulses. McEwan has a patent for a fast MOSFET switch
> #5,332,938. Other design use a push-pull type circuit like an H-bridge.
>
> As far as receivers go, check out patent #5,345.471 by McEwan (an
> engineer who Livermore Labs), it shows several receivers made of op-amps
> with a simple diode detector. The receiver really just an integrator and
> and amplifier.
> The receiver works by adding (or subtracting) an incomming pulse train
> from the antenna to a locally generated pulse train that matches the
> transmitted pattern. The pattern could be a simple equally spaced pulse
> train, or a complex psuedo random pattern.
>
> An easy way to look up this patent (or others) is on the IBM patent
> database at:
> http://www.patents.ibm.com/details?&pn=US05345471__
>
> To send digital data the transmitter shifts between one of two patterns
> or simply shifts the timing of the pattern slightly. The receiver would
> compare two corelated patterns using a comparator to recover the 0's and
> 1's.
>
> In many ways UWB radios are about as simple as tuned radio frequency
> receivers or even simpler, except for the pn-codes and corelator. This
> seems like something hams should be playing with. I am getting tired of
> waiting for something to be available commercially. I would like to try
> make something myself.
>
> Seems like you might be able to build an impulse radio for about $10 or
> $20 worth of parts. Maybe a PIC microcontroller chip could control the
> pulse train by momentarily "tweeking" the frequency of a master
> oscillator that runs a sequencer that could be something as simple as
> some XOR gates and a shift register. The PIC would somehow detect when
> things were in phase.
>
> I am no expert on SS radios. What do you experts think ?
>
> How about an UWB radio from common parts that a high school kid could
> build ?
>

> Thanks, Tim. WA6KJL
>
>
>
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

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13. [ss] Re: Simple Ultra Wide Band Radio ?

From: tv@juno.com
Date: Sun, 16 Apr 2000 11:16:24 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: jeff@wa1hco.mv.com
Message-ID: <LYR6751-77949-2000.04.16-13.20.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Jeff,

Thanks you for the great ideas. Looks like the R1 receiver would be a
great way to go
for UWB experiments. I think I will order one and play around with it.
Probably would work better than the
circuits in patent #5345471 which use a single diode mixer, but I want to
try the simple op-amp circuit also. But since you had success with R-1
direct conversion receiver, I would like to try to duplicate what you did
first.   If you don't mind, could you send more details of your test with
R-1 ?

I like your idea of using the 74FCT244 for the transmitter. Seems like
the PN sequence could be generated by a $3 PIC microcontroller like the
common 16F84. Running at 10 MHz and using a simple sequence of bit set
and bit clear instructions (BSF/BCF) it could generate 2.5 million bit
outputs per second (not pulses, transitions from high-to-low or
low-to-high). Would that be fast enough to generate the pseudo random
sequence ?

Just to test the idea, could you just use a simple pulse train from a
function generator ?

Tim

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14. [ss] Re: Simple Ultra Wide Band Radio ?

From: "Jeff Millar" <jeff@wa1hco.mv.com>
Date: Sun, 16 Apr 2000 16:28:01 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-77959-2000.04.16-15.32.42--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We used an impulse transmitter from a ground penetrating
radar. It consisted of an exciter/amplifier driving a resistively
loaded bowtie antenna (loaded to minimize ringing). We simply
fed the exciter pulse via cable to the LO input of the KK7B
board...probably a predecessor to the R1. The pulse
operated at about 1 GHz with hundreds of MHz of BW. Modulation shifted
the pulse position about 100-200 ps. The transmitter used a pulse rep
rate of about 1 MHz and resulting audio quality seemed very hi-fi.

Signals across the room seem very strong...never attempted any kind of
range measurement...too much complexity with the acquisition... the main
goal was radars anyway.

A simple pulse train, without pseudo random will work fine. The rep rate
needs to be enough to meet nyquist for the modulation bandwidth.
Increasing the rep rate increases transmitted power and allows for

integration of the output.

Let's say you transmit a 100 KHz square wave with sub-ns edge transitions,
You can use a square wave to feed the bowtie dipole directly, The DC and
low frequency components of the the time between transitions will not
propagate. At the reciever, you want to use a copy of the 100 KHz square
wave, but you can't allow the mixer to see the DC between transitions
because
it will let antenna noise through the mixer to the IF. Think of it as
time selectivity instead of frequency selectivity. So run the 100 KHz
through
a high pass filter to capture just the edge transistion. Match the filter
cutoff to the bowtie frequency.

jeff
wa1hco

----- Original Message -----
From: <tv@juno.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <jeff@WA1HCO.MV.COM>
Sent: Sunday, April 16, 2000 2:16 PM
Subject: [ss] Re: Simple Ultra Wide Band Radio ?

> Hi Jeff,
>
> Thanks you for the great ideas. Looks like the R1 receiver would be a
> great way to go
> for UWB experiments. I think I will order one and play around with it.
> Probably would work better than the
> circuits in patent #5345471 which use a single diode mixer, but I want to
> try the simple op-amp circuit also. But since you had success with R-1
> direct conversion receiver, I would like to try to duplicate what you did
> first.   If you don't mind, could you send more details of your test with
> R-1 ?
>
> I like your idea of using the 74FCT244 for the transmitter. Seems like
> the PN sequence could be generated by a $3 PIC microcontroller like the
> common 16F84. Running at 10 MHz and using a simple sequence of bit set
> and bit clear instructions (BSF/BCF) it could generate 2.5 million bit
> outputs per second (not pulses, transitions from high-to-low or
> low-to-high). Would that be fast enough to generate the pseudo random
> sequence ?
>
> Just to test the idea, could you just use a simple pulse train from a
> function generator ?
>
> Tim
>
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

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15. [ss] Re: Looking for Part 15 Solution

From: N2HDW@aol.com
Date: Sun, 16 Apr 2000 21:04:02 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-77991-2000.04.16-20.04.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In a message dated 4/13/00 10:55:46 PM Eastern Daylight Time,
kb9mwr@yahoo.com writes:

Hello Steve,

I am also interested in hearing more about hams using part 15 hardware as you
said, converting/using these units for part 97 use.

Barry Groupp N2HDW

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] Re: Simple Ultra Wide Band Radio ?

From: tv@juno.com
Date: Sun, 16 Apr 2000 21:23:46 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: jeff@wa1hco.mv.com
Message-ID: <LYR6751-78018-2000.04.16-23.24.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Jeff.

Thanks for more great ideas. I am going to give this a try.

>At the reciever, you want to use a copy of the 100 KHz square
>wave, but you can't allow the mixer to see the DC between transitions
>because it will let antenna noise through the mixer to the IF.

Would a small DC blocking capacitor serve this function ?

> Think of it as
>time selectivity instead of frequency selectivity. So run the 100 KHz
>through a high pass filter to capture just the edge transistion. Match
the filter
>cutoff to the bowtie frequency.

Had a thought, could the high pass filter somehow be another bowtie
dipole emitting a week version of the local PN sequence for the receiver
?

Otherwise what would you suggest for the highpass filter ?

Thanks, Tim

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] Re: Simple Ultra Wide Band Radio ?

From: "Jeff Millar" <jeff@wa1hco.mv.com>
Date: Mon, 17 Apr 2000 01:10:33 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78035-2000.04.17-00.15.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Blocking cap would be good, 6 pf is 50 ohms at 500 MHz, the mixer
looks like 50 ohms, so it's -6 dB at 500 MHz. Something in that
range would be good. The uncertainties include bowtie size and
TTL edge speed. Almost anything will work, getting max range
takes some tweaking. Scale the cap to suit the size of your
antenna.

Using a local bowtie at the rx creates a time domain matched
filter, thus matching the ringing...might gain a couple of dB.
Generally, tranmitters avoid ringing because it generates a
line in the spectrum.

----- Original Message -----
From: <tv@juno.com>
To: <ss@lists.tapr.org>
Cc: <jeff@wa1hco.mv.com>
Sent: Monday, April 17, 2000 12:23 AM
Subject: Re: [ss] Re: Simple Ultra Wide Band Radio ?

> Hi Jeff.
>
> Thanks for more great ideas. I am going to give this a try.
>
> >At the reciever, you want to use a copy of the 100 KHz square
> >wave, but you can't allow the mixer to see the DC between transitions
> >because it will let antenna noise through the mixer to the IF.
>
> Would a small DC blocking capacitor serve this function ?
>

> > Think of it as
> >time selectivity instead of frequency selectivity. So run the 100 KHz
> >through a high pass filter to capture just the edge transistion. Match
> the filter
> >cutoff to the bowtie frequency.
>
> Had a thought, could the high pass filter somehow be another bowtie
> dipole emitting a week version of the local PN sequence for the receiver
> ?
>
> Otherwise what would you suggest for the highpass filter ?
>
> Thanks, Tim
>

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18. [ss] Re: Simple Ultra Wide Band Radio ?

From: Jake Brodsky <frussle@erols.com>
Date: Wed, 19 Apr 2000 12:40:29 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78641-2000.04.19-11.44.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sun, 16 Apr 2000 11:16:24 -0700, you wrote:

>Thanks you for the great ideas. Looks like the R1 receiver would be a
>great way to go
>for UWB experiments. I think I will order one and play around with it.
>Probably would work better than the
>circuits in patent #5345471 which use a single diode mixer, but I want to
>try the simple op-amp circuit also. But since you had success with R-1
>direct conversion receiver, I would like to try to duplicate what you did
>first.   If you don't mind, could you send more details of your test with
>R-1 ?

The R-1 might not be appropriate unless you are able to derive pulse
timing from another source. The R-2 is an I/Q direct conversion SSB
receiver. Yes, the diplexer is almost identical to the R-1. The
advantage to having I and Q channels is that you can tack a simple
costas loop on the tail end of the R-2 which can keep you
synchronized.

I was working an a Direct sequence version of this very idea a couple
years ago. And then I had kids. No more time for that ;-)

>I like your idea of using the 74FCT244 for the transmitter. Seems like
>the PN sequence could be generated by a $3 PIC microcontroller like the
>common 16F84. Running at 10 MHz and using a simple sequence of bit set
>and bit clear instructions (BSF/BCF) it could generate 2.5 million bit
>outputs per second (not pulses, transitions from high-to-low or
>low-to-high). Would that be fast enough to generate the pseudo random
>sequence ?

Depends on what you want to use for modulation...

For simplicity, I suggest the Mini-R2. The diplexer is wider and it's
simpler.

Jake Brodsky, mailto:frussle@erols.com
"Nearly fifty percent of all graduates came from
the bottom half of the class."

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19. [ss] TAPR SS Radio MAC address

From: Steve Stroh <sks-lists@strohpub.com>
Date: Wed, 19 Apr 2000 19:16:55 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78764-2000.04.19-22.18.15--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Has TAPR applied to the IEEE to get their own Organizational Unique
Identifier (OUI) of the Ethernet MAC address for the TAPR Spread Spectrum
radio?

If not, TAPR will need to, won't they (since the SSR will be a unique
Ethernet device)?

If so, could it be opened to Amateur Radio in general, and perhaps add some
"experimental" addresses?

We're working on a project in the Seattle area that looks like it will need
a OUI, and we'd prefer to do it in a valid manner. Downside is that to get
an OUI from the IEEE is $1200 US - a bit more than our current budget.

Thanks,

Steve Stroh N8GNJ

--
Steve Stroh   steve@strohpub.com   Woodinville, Washington USA
Learn, Share, Grow, and Enjoy!

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] Re: TAPR SS Radio MAC address

From: Jake Janovetz <janovetz@tempest.ece.uiuc.edu>
Date: Wed, 19 Apr 2000 22:19:26 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78765-2000.04.19-22.26.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You might have some luck talking someone at a small company
into donating a subsection of their address space. They allocate
2^24 addresses per company which is a lot.

Some time ago, someone on comp.embedded was giving out groups of
256 addresses to interested hobbyists. I got one of those.

   Cheers,
   Jake

On Wed, Apr 19, 2000 at 07:16:55PM -0700, Steve Stroh wrote:
>
> Has TAPR applied to the IEEE to get their own Organizational Unique
> Identifier (OUI) of the Ethernet MAC address for the TAPR Spread Spectrum
> radio?
>
> If not, TAPR will need to, won't they (since the SSR will be a unique
> Ethernet device)?
>
> If so, could it be opened to Amateur Radio in general, and perhaps add some
> "experimental" addresses?
>
> We're working on a project in the Seattle area that looks like it will need
> a OUI, and we'd prefer to do it in a valid manner. Downside is that to get
> an OUI from the IEEE is $1200 US - a bit more than our current budget.
>
> Thanks,
>
> Steve Stroh N8GNJ
>
> --
> Steve Stroh   steve@strohpub.com   Woodinville, Washington USA
> Learn, Share, Grow, and Enjoy!
>
>
> ---
> You are currently subscribed to ss as: JANOVETZ@UIUC.EDU
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

--
   janovetz@uiuc.edu | How can it be that mathematics, being after all a
 University of Illinois | product of human thought independent of experience,
                        | is so admirably adapted to the objects of reality?
        PP-ASEL | - Albert Einstein

Disclaimer: The policies of this University certainly do not reflect my
            own opinions, objectives, or agenda.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] Re: TAPR SS Radio MAC address

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 19 Apr 2000 22:46:20 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78769-2000.04.19-22.47.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We will not be appyling for OUI address block. We are using a part from
Dallas Semiconductor that has that as part of the part function. Thus, we
are buying a number that is under their block.

Cheers - Greg

>Has TAPR applied to the IEEE to get their own Organizational Unique
>Identifier (OUI) of the Ethernet MAC address for the TAPR Spread Spectrum
>radio?
>
>If not, TAPR will need to, won't they (since the SSR will be a unique
>Ethernet device)?
>
>If so, could it be opened to Amateur Radio in general, and perhaps add some
>"experimental" addresses?
>
>We're working on a project in the Seattle area that looks like it will need
>a OUI, and we'd prefer to do it in a valid manner. Downside is that to get
>an OUI from the IEEE is $1200 US - a bit more than our current budget.
>
>Thanks,
>
>Steve Stroh N8GNJ

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] UPdate on things

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 19 Apr 2000 22:49:41 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78771-2000.04.19-22.56.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve L is fabing another RF board so that we have an extra one in Dallas
for Bob to work on PIC code.

Any more on the RF board John S ?

Also, the digital board is back and Steve L will be building one of those up.

Very good news.

Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] Looking for VCXO

From: Sigit <sigit94@student.te.ugm.ac.id>
Date: Thu, 20 Apr 2000 12:55:14 +0700 (JVT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-78790-2000.04.20-00.41.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dear All,

I have problem that I could not solve until now.
I want to build spread spectrum, but dedicated for
experiment only. There is no high frequency carrier.
I will use frequency arround 16.384 kHz for carrier and PN clock.
Ofcourse, the data clock will be as low as 100 Hz. For generating
that clock I will use 32.768 kHz crystal.
The methode that I will use is DLL (Delay Lock Loop). We know
that in DLL methode we need VCXO (Voltage Control Crystal Oscillator).
That is my problem. I still could build VCXO using that frequency.
Anybody help me ?

Thank you very much.
Regards,
SIGT

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] Re: Simple Ultra Wide Band Radio ?

From: tv@juno.com
Date: Thu, 20 Apr 2000 21:40:59 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: frussle@erols.com
Message-ID: <LYR6751-78919-2000.04.20-23.42.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>On Wed, 19 Apr 2000 you wrote
>The R-1 might not be appropriate unless you are able to derive pulse
>timing from another source. The R-2 is an I/Q direct conversion SSB
>receiver. Yes, the diplexer is almost identical to the R-1. The
>advantage to having I and Q channels is that you can tack a simple
>costas loop on the tail end of the R-2 which can keep you
>synchronized.

I had to do a little research on the very clever Costa loop. Great idea.

Using the Costa loop a microcontroller generated psuedo random (PN) pulse
train for the
receiver local mixer signal should be able to be maintained by slightly
varying the clock frequency of the microcontroller.
Does that seem reasonable ?

The biggest problem seem to be matching up the local PN pulse train with
the transmitted signal. Hunting for it could take a while.

There must be more hams out there who have tinkered with this. There
needs to be more sharing of ideas. Why let the professional engineers
have all the fun !

Tim

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] FHSS Radio

From: "stewart teaze" <horseshoe7@yahoo.com>
Date: Fri, 21 Apr 2000 17:50:26
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-79139-2000.04.21-17.51.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm wondering if there is anyway I can help out on this project.

I'm a Systems/Software Engineer for General Atomics Aeronautical Systems
where I'm currently working on UAV(Unmanned Air Vehicle, aka Remote Control
Aircraft) applications in San Diego, CA. I have been working on UAVs for
10 years on the Hunter/Predator/Prowler/Gnat systems - which includes a lot
of work with synchronous serial communication drivers and TCP/IP

communications applications. I have 20 years experience in the Industry,
which includes extensive integration and test experience. In the '80s I
did a lot of assembly language programming, and I am interested in
PIC-based development. Is there any way that I could help out with I&T or
beta-testing on initial units?

Stewart Teaze
N0MHS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] Re: ss digest: April 20, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Fri, 21 Apr 2000 21:27:20 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-79163-2000.04.21-20.27.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Two items:

1. Is a reply message an appropiate method of using this forum?

2. I am almost into the lock-up problem on a 900 MHz band DS link. I keep
asking why receiver lock-up is so difficult. Why not wend a preamble,
which has a gap in it. The receiver "sees" the gap, and then knows after
the remaining preamble is sent, the code starts.

Of course, my system has only one P/N code.

What am I overlooking here?

Jim Ussailis, W1EQO

ussailis@shaysnet.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: ss digest: April 20, 2000

From: Derek Lassen <kn6td@clubnet.net>
Date: Fri, 21 Apr 2000 18:52:06 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-79168-2000.04.21-20.56.01--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

re 1) :
Reply is good. But trim it of stuff not relevant to follow the thread.

re 2):
How do you lock onto the preamble?

The whole point of SS is processing gain.

At 09:27 PM 4/21/00 -0400, you wrote:
>Two items:
>
>1. Is a reply message an appropiate method of using this forum?
>
>2. I am almost into the lock-up problem on a 900 MHz band DS link. I keep
>asking why receiver lock-up is so difficult. Why not wend a preamble,
>which has a gap in it. The receiver "sees" the gap, and then knows after
>the remaining preamble is sent, the code starts.
>
>Of course, my system has only one P/N code.
>
>What am I overlooking here?
>
>Jim Ussailis, W1EQO
>
>ussailis@shaysnet.com

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] Re: Simple Ultra Wide Band Radio ?

From: Jake Brodsky <frussle@erols.com>
Date: Fri, 21 Apr 2000 23:12:11 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-79170-2000.04.21-22.16.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 20 Apr 2000 21:40:59 -0700, you wrote:

>I had to do a little research on the very clever Costa loop. Great idea.
>
>Using the Costa loop a microcontroller generated psuedo random (PN) pulse
>train for the
>receiver local mixer signal should be able to be maintained by slightly
>varying the clock frequency of the microcontroller.
>Does that seem reasonable ?

Sure, as long as the rate of PN phase variation from the transmitter
at the other end doesn't exceed the phase slewing ability at the
receiver, you should be fine. Tinkering with the clock ought to do
just fine. In fact, you may want to slow the clock up to some preset
so that you can advance through the PN codes until you acquire the
signal.

>The biggest problem seem to be matching up the local PN pulse train with
>the transmitted signal. Hunting for it could take a while.

Many DSSS radios when unlocked use a preset faster or slower PN rate
which will allow for PN lockup when the two codes match. Assuming the
PN sequence isn't terribly long, lockup time should be reasonable.
That's why we used the older 193 bit PN sequence from the old
regulations (described in the SS handbook from ARRL). It was long
enough to spread, and short enough to acquire rapidly.

>There must be more hams out there who have tinkered with this. There
>needs to be more sharing of ideas. Why let the professional engineers
>have all the fun !

I agree.

Jake Brodsky, mailto:frussle@erols.com
"Nearly fifty percent of all graduates came from
the bottom half of the class."

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: Looking for VCXO

From: ela97pg@sheffield.ac.uk
Date: Sun, 23 Apr 2000 19:45:35 +0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-79419-2000.04.23-13.47.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes I could help you...

I send you a cct diagram for a VCXO built and tested. It works
perfectly...

Since your crystal is at 32.768 KHz and you wanna play at 16.384
you just add a d-type flip flop configured as a frequency divider (/2)

Ok good luck...

P.S. I can reconfigure it in order to give you rapid acquisition just
by adding a transitor switch that switches the clock from a
frequency offset providing you the abbility to slide the code against
the received code signal.

When you finally synchronise them the switch will make your
VCXO go back at the frequency were it should be.

It took me about 3 secs to synchronise them and extract the data
using a 255 chip code..

Good luck, I have mastered D.S. S.S now, so anything you need

tell me...

By the way are you a student? Let me know...

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

30. [ss] Re: Looking for VCXO

From: ela97pg@sheffield.ac.uk
Date: Sun, 23 Apr 2000 19:50:46 +0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-79421-2000.04.23-13.56.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes I could help you...

I send you a cct diagram for a VCXO built and tested. It works
perfectly...

Since your crystal is at 32.768 KHz and you wanna play at 16.384
you just add a d-type flip flop configured as a frequency divider (/2)

Ok good luck...

P.S. I can reconfigure it in order to give you rapid acquisition just
by adding a transitor switch that switches the clock from a
frequency offset providing you the abbility to slide the code against
the received code signal.

When you finally synchronise them the switch will make your
VCXO go back at the frequency were it should be.

It took me about 3 secs to synchronise them and extract the data
using a 255 chip code..

Good luck, I have mastered D.S. S.S now, so anything you need
tell me...

By the way are you a student? Let me know...
[Attachment: YOURVCXO.zip; application/zip; 9,643 bytes]

31. [ss] Suggestions?

From: "Rob Wittner" <rmw@rwa-inc.com>
Date: Fri, 28 Apr 2000 10:36:17 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-80430-2000.04.28-09.37.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does anyone know if there is a PCI or ISA card made that will accept a
16-bit PCMCIA card in order for a desktop machine to use a PCMCIA 802.11
card? I know I've seen one of these before, and the card manufacturer
(3Com) shows one on their web site, but they deny its existence. (Figures.)

Any ideas?

Thanks in advance,

     -Rob
      KZ5RW

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

32. [ss] Re: Suggestions?

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Fri, 28 Apr 2000 09:58:24 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-80434-2000.04.28-10.00.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rob Wittner wrote:
>
> Does anyone know if there is a PCI or ISA card made that will accept a
> 16-bit PCMCIA card in order for a desktop machine to use a PCMCIA 802.11

> card? I know I've seen one of these before, and the card manufacturer
> (3Com) shows one on their web site, but they deny its existence. (Figures.)

I'll check at the PX this weekend, I've seen, over there, a combo 3.5/PC
card combo. Don't know about mfgr or interface off hand.
--
Gerry Creager
"Due to the confusion from too many genres of music, we have decided to
put both country music and rap music into the genre of Crap music."

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] Re: Suggestions?

From: adesjard@cme.com
Date: Fri, 28 Apr 2000 10:15:46 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-80437-2000.04.28-10.17.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rob,

        Take a look at SanDisk, they make a combo PCMCIA / CF desktop PC adapter,
and I presently use on with an Aironet DS4800 PC card.

Alan DesJardins N5VXL
RF Network Engineer
MIS Systems
Chicago Mercantile Exchange
30 South Wacker Drive
Chicago, IL 60606
(312)338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Gerry Creager N5JXS
Sent: Friday, April 28, 2000 9:58 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Suggestions?

Rob Wittner wrote:
>
> Does anyone know if there is a PCI or ISA card made that will accept a
> 16-bit PCMCIA card in order for a desktop machine to use a PCMCIA 802.11
> card? I know I've seen one of these before, and the card manufacturer
> (3Com) shows one on their web site, but they deny its existence.
(Figures.)

I'll check at the PX this weekend, I've seen, over there, a combo 3.5/PC
card combo. Don't know about mfgr or interface off hand.
--
Gerry Creager
"Due to the confusion from too many genres of music, we have decided to
put both country music and rap music into the genre of Crap music."

You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
[Attachment: Desjardins, Alan.vcf; application/octet-stream; 140 bytes]

34. [ss] Re: Suggestions?

From: Keith Justice <kf7tp@cybertrails.com>
Date: Fri, 28 Apr 2000 14:22:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-80506-2000.04.28-16.25.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Last year I bought a pair of "Aviator 2.4" wireless lan pcmcia cards. They
came with ISA adapters. The adapters say RayCom RIS 100. Made in
Korea.   You could try a search on that. They have jumpers to set the slot
to 1 - 4 and DMA channel. The chip is a Ricoh RF5C296.

Keith

At 10:36 AM 4/28/2000 -0400, you wrote:

>Does anyone know if there is a PCI or ISA card made that will accept a
>16-bit PCMCIA card in order for a desktop machine to use a PCMCIA 802.11
>card? I know I've seen one of these before, and the card manufacturer
>(3Com) shows one on their web site, but they deny its existence. (Figures.)
>
>Any ideas?
>
>Thanks in advance,
>
>   -Rob
>   KZ5RW
>
>
>
>---
>You are currently subscribed to ss as: kf7tp@cybertrails.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

Keith Justice, KF7TP
6759 Wagonwheel Lane
Lakeside, AZ 85929
LL: 520-537-8657
Occ. in Mesa, AZ: 480-461-8687
kf7tp@cybertrails.com
kf7tp@kf7tp.ampr.org

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] NETCPA meeting Saturday

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Fri, 28 Apr 2000 17:45:41 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-80508-2000.04.28-16.46.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

(I apologize for the late notice but I've been up to my butt in alligators)

This coming Saturday April 29th the New England TCP association will be
holding a meeting at miter in Bedford MA. The group is trying to build a
New England based wide area network and would welcome volunteers. For more
information about the group, the upcoming meeting, and our activities, take
a look at our website. http://www.netcpa.org/

thanks

--- eric (ka1eec)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] NOS for Palm

From: vincen@mail.enol.com
Date: Sun, 30 Apr 2000 16:59:08 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-80881-2000.04.30-18.01.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I would like to use my palm to access Internet Email over ham radio.

Is there a JNOS like program for the palm?

What would be necessary to do this?

Are there some ss options coming along that could be uses in the future.

This mail sent through http://webmail.enol.com/

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

June 2000

Original source file: ss.0006
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0006

1. [ss] Broadband for hams?

From: Lee810@aol.com
Date: Sun, 11 Jun 2000 13:39:27 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90206-2000.06.11-12.42.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The most recent 'lively' discussion on the amsat-bb was related to further promoting digital communications which generated more than 60 responses. (entitled "Going Digital....Ham Radio?)

In reading through the responses, it seems that some folks believe that we should just stick to what we have because it's 'good enough' for what hams need, i.e., simple, low bandwidth digital communications and that's certainly true for modes like APRS and PSK31. But ever since I've read the keynote speech by Lyle Johnson at the 1996 Digital Communications Conference (http://www.tapr.org/tapr/html/Flyle.banquet.html), which I highly recommend, I've been wondering if hams will ever be able to 'advance the radio art' with respect to broadband digital communications. I have subscribed to the TAPR spread spectrum email list and it is almost without any discussion. (I will cross post this message for the sake of trying to stimulate some). I am not talking about technological advances, but rather having access to something for which the rest of the world will have to wait, the way we did with repeaters, phone patches, HTs, satellite communications, email (via packet), etc.

I ran across a web site today (http://www.midcoast.net/wirelessfaq.html) that is just full of information generated by a local ISP who is quietly beating us to the 2.4 Ghz band with non-licensed power levels and antennas. Just think of what we could do if we were able to pool together our resources and co-locate a broadband connection with an existing repeater tower. We could have high speed, persistent Internet connections for any hams within line of sight of the repeater. This would be especially nice for those of us who live far enough from town that DSL or even cable modems are never going to be an option. Maybe this violates the 'spirit of ham radio'...but it seems silly to share spectrum with commercial services and deny ourselves the same privileges that non-licensed users enjoy. The main benefit for us is that we could have better power and antenna systems (and hence greater distance). We could have portable broadband Internet connections years before anyone else.

The problem in moving forward may stem from the 'no commercial' activity of ham radio. Accessing a manufacturer's web site presumably would violate that rule. Reading email has similar problems if the sender is not a ham. However, unlicensed operators are utilizing the same frequencies with no restrictions. Why are we holding ourselves back? It would be fairly easy to police against abuses, by periodically monitoring activity logs and preventing resource hogging amongst the ranks of our members.

For all I know, there may be some hams doing just this but perhaps are reluctant to speak about it publicly for fear of stirring up a hornet's nest with respect to the non-commercial policy we have with ham radio. I know that even suggesting Internet email access through packet got a lot of people in an uproar because of the third party traffic implications. This thinking is based on the scarcity principle of bandwidth. Well, how scarce are the microwave bands we are not even utilizing?

I realize that this message was a bit 'off topic' for the satellite group, so if anyone has a problem with that, we can just move it in the spread spectrum group. If you don't have access to the TAPR ss group, you can join without worrying about getting a ton of email. The ss group generates only a few email messages a month.

73,

Lee Devlin, KØLEE (K0LEE)
Greeley, CO
http://members.aol.com/lee810/ham.html

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] Re: Broadband for hams?

From: Dave Pomeroy <dave_pomeroy@voyager.net>
Date: Sat, 10 Jun 2000 14:15:43 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90211-2000.06.11-13.16.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lee,
        I couldn't agree more. We should be doing some kind of wireless
internet at least, even if we don't connect to the "internet". I use to
be up to speed on the technical end of electronics but been out of the
business for 40 years. Also been out of ham for 40 years. Just got
back in a year ago. Even I can see the possiblities. I would donate
time, money, and what ever talent I have. What say everyone?
Dave Pomeroy K8DNP Southwestern Michigan

Lee810@aol.com wrote:
>
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> promoting digital communications which generated more than 60 responses.
> (entitled "Going Digital....Ham Radio?)
>
> In reading through the responses, it seems that some folks believe that we
> should just stick to what we have because it's 'good enough' for what hams
> need, i.e., simple, low bandwidth digital communications and that's certainly
> true for modes like APRS and PSK31. But ever since I've read the keynote
> speech by Lyle Johnson at the 1996 Digital Communications Conference
> (http://www.tapr.org/tapr/html/Flyle.banquet.html), which I highly recommend,
> I've been wondering if hams will ever be able to 'advance the radio art' with
> respect to broadband digital communications. I have subscribed to the TAPR
> spread spectrum email list and it is almost without any discussion. (I will
> cross post this message for the sake of trying to stimulate some). I am not
> talking about technological advances, but rather having access to something
> for which the rest of the world will have to wait, the way we did with
> repeaters, phone patches, HTs, satellite communications, email (via packet),
> etc.
>
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> is just full of information generated by a local ISP who is quietly beating
> us to the 2.4 Ghz band with non-licensed power levels and antennas. Just
> think of what we could do if we were able to pool together our resources and
> co-locate a broadband connection with an existing repeater tower. We could
> have high speed, persistent Internet connections for any hams within line of
> sight of the repeater. This would be especially nice for those of us who
> live far enough from town that DSL or even cable modems are never going to be
> an option. Maybe this violates the 'spirit of ham radio'...but it seems
> silly to share spectrum with commercial services and deny ourselves the same
> privileges that non-licensed users enjoy. The main benefit for us is that we
> could have better power and antenna systems (and hence greater distance). We
> could have portable broadband Internet connections years before anyone else.
>
> The problem in moving forward may stem from the 'no commercial' activity of
> ham radio. Accessing a manufacturer's web site presumably would violate that
> rule. Reading email has similar problems if the sender is not a ham.
> However, unlicensed operators are utilizing the same frequencies with no
> restrictions. Why are we holding ourselves back? It would be fairly easy to
> police against abuses, by periodically monitoring activity logs and
> preventing resource hogging amongst the ranks of our members.
>
> For all I know, there may be some hams doing just this but perhaps are
> reluctant to speak about it publicly for fear of stirring up a hornet's nest
> with respect to the non-commercial policy we have with ham radio. I know
> that even suggesting Internet email access through packet got a lot of people
> in an uproar because of the third party traffic implications. This thinking
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> microwave bands we are not even utilizing?
>
> I realize that this message was a bit 'off topic' for the satellite group, so
> if anyone has a problem with that, we can just move it in the spread spectrum
> group. If you don't have access to the TAPR ss group, you can join without
> worrying about getting a ton of email. The ss group generates only a few
> email messages a month.
>
> 73,
>
> Lee Devlin, KØLEE (K0LEE)
> Greeley, CO
> http://members.aol.com/lee810/ham.html
>

> ---
> You are currently subscribed to ss as: dave_pomeroy@voyager.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: [amsat-bb] Broadband for hams?

From: John Hansen <john@hansen.net>
Date: Sun, 11 Jun 2000 15:27:12 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90223-2000.06.11-14.30.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 01:39 PM 6/11/00 -0400, Lee810@aol.com wrote:

>I ran across a web site today (http://www.midcoast.net/wirelessfaq.html) that
>is just full of information generated by a local ISP who is quietly beating
>us to the 2.4 Ghz band with non-licensed power levels and antennas. Just
>think of what we could do if we were able to pool together our resources and
>co-locate a broadband connection with an existing repeater tower. We could
>have high speed, persistent Internet connections for any hams within line of
>sight of the repeater. This would be especially nice for those of us who
>live far enough from town that DSL or even cable modems are never going to be
>an option. Maybe this violates the 'spirit of ham radio'...but it seems
>silly to share spectrum with commercial services and deny ourselves the same
>privileges that non-licensed users enjoy. The main benefit for us is that we
>could have better power and antenna systems (and hence greater distance). We
>could have portable broadband Internet connections years before anyone else.

I started doing this on a private basis (for my own use) about 3 1/2 years
ago. The setup was described in PSR at the time and also in the TAPR
Spread Spectrum book. That system is still providing me with reliable
Internet access.   I'm doing this (and so are a lot of others) not as a
ham band activity, but as a "license-free" enterprise.

>The problem in moving forward may stem from the 'no commercial' activity of
>ham radio. Accessing a manufacturer's web site presumably would violate that
>rule.

What makes you think that? I see no reason that this would violate Part
97.   In fact, since the rules now allow you to conduct commercial
transactions (as long as they are only for your own private use),
presumably you could even buy radio equipment on line from a manufacturer's
website, as long as you instigated the transaction, not the store. I can't
think of why this is any different that the famous "buying a pizza with an
autopatch" case that was specifically decided by the FCC a number of years
ago. Is there something about doing this via the Internet that would make
it fundamentally different than doing it via an autopatch?

John, W2FS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Sun, 11 Jun 2000 13:58:11 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90240-2000.06.11-16.02.36--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have been working on this for several years. Alas, I keep refining the
speeds upwards as technology changes before I get the thing done. It
started as 256K bpson 915 MHz in 1993. I am to 40M bps on 10GHz now. I
just read a NASA tech brief about a SBIR research project that putt 155M
bps on 72 MHz wide K band channel. Hmmmm.

The problem is that more than just SS is involved.

I'd love to get into more detail, but I don't think here is the place. But
then again the networking SIG seems to be the place, but gets no traffic.
Any ssuggestions?

73 de KN6TD

(s) Derek

At 02:15 PM 6/10/00 -0400, you wrote:
>Lee,
>   I couldn't agree more. We should be doing some kind of wireless
>internet at least, even if we don't connect to the "internet". I use to
>be up to speed on the technical end of electronics but been out of the
>business for 40 years. Also been out of ham for 40 years. Just got
>back in a year ago. Even I can see the possiblities. I would donate
>time, money, and what ever talent I have. What say everyone?
>Dave Pomeroy K8DNP Southwestern Michigan
>
>Lee810@aol.com wrote:
> >
> > The most recent 'lively' discussion on the amsat-bb was related to further
> > promoting digital communications which generated more than 60 responses.
> > (entitled "Going Digital....Ham Radio?)
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> > true for modes like APRS and PSK31. But ever since I've read the keynote
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> > I've been wondering if hams will ever be able to 'advance the radio
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> > respect to broadband digital communications. I have subscribed to the TAPR
> > spread spectrum email list and it is almost without any discussion. (I will
> > cross post this message for the sake of trying to stimulate some). I am not
> > talking about technological advances, but rather having access to something
> > for which the rest of the world will have to wait, the way we did with
> > repeaters, phone patches, HTs, satellite communications, email (via
> packet),
> > etc.
> >
> > I ran across a web site today
> (http://www.midcoast.net/wirelessfaq.html) that
> > is just full of information generated by a local ISP who is quietly beating
> > us to the 2.4 Ghz band with non-licensed power levels and antennas. Just
> > think of what we could do if we were able to pool together our
> resources and
> > co-locate a broadband connection with an existing repeater tower. We could
> > have high speed, persistent Internet connections for any hams within
> line of
> > sight of the repeater. This would be especially nice for those of us who
> > live far enough from town that DSL or even cable modems are never going
> to be
> > an option. Maybe this violates the 'spirit of ham radio'...but it seems
> > silly to share spectrum with commercial services and deny ourselves the
> same
> > privileges that non-licensed users enjoy. The main benefit for us is
> that we
> > could have better power and antenna systems (and hence greater
> distance). We
> > could have portable broadband Internet connections years before anyone
> else.
> >
> > The problem in moving forward may stem from the 'no commercial' activity of
> > ham radio. Accessing a manufacturer's web site presumably would
> violate that
> > rule. Reading email has similar problems if the sender is not a ham.
> > However, unlicensed operators are utilizing the same frequencies with no
> > restrictions. Why are we holding ourselves back? It would be fairly
> easy to
> > police against abuses, by periodically monitoring activity logs and
> > preventing resource hogging amongst the ranks of our members.
> >
> > For all I know, there may be some hams doing just this but perhaps are
> > reluctant to speak about it publicly for fear of stirring up a hornet's
> nest
> > with respect to the non-commercial policy we have with ham radio. I know
> > that even suggesting Internet email access through packet got a lot of
> people
> > in an uproar because of the third party traffic implications. This

> thinking
> > is based on the scarcity principle of bandwidth. Well, how scarce are the
> > microwave bands we are not even utilizing?
> >
> > I realize that this message was a bit 'off topic' for the satellite
> group, so
> > if anyone has a problem with that, we can just move it in the spread
> spectrum
> > group. If you don't have access to the TAPR ss group, you can join without
> > worrying about getting a ton of email. The ss group generates only a few
> > email messages a month.
> >
> > 73,
> >
> > Lee Devlin, KØLEE (K0LEE)
> > Greeley, CO
> > http://members.aol.com/lee810/ham.html
> >
> > ---
> > You are currently subscribed to ss as: dave_pomeroy@voyager.net
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] Re: Broadband for hams?

From: "Shawn T. Rutledge" <rutledge@cx47646-a.phnx1.az.home.com>
Date: Sun, 11 Jun 2000 14:14:32 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90242-2000.06.11-16.17.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sun, Jun 11, 2000 at 01:58:11PM -0700, Derek Lassen wrote:
> I'd love to get into more detail, but I don't think here is the place. But
> then again the networking SIG seems to be the place, but gets no traffic.
> Any ssuggestions?

Well if you do it on a different list, can you please give some warning
so I can go subscribe?

As someone else said, this list is low-traffic anyway, so maybe discussing
this would "stimulate" something.

I don't have a lot of knowledge to contribute myself, except that I
would like to do it. Was thinking of one of those links using
Proxim Symphony cards and dish antennas.

--
  _______   Shawn T. Rutledge / KB7PWD ecloud@bigfoot.com
 (_ | |_)   http://www.bigfoot.com/~ecloud kb7pwd@kb7pwd.ampr.org
  __) | | ____
Get money for spare CPU cycles at http://www.ProcessTree.com/?sponsor=5903

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Sun, 11 Jun 2000 17:41:39 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90280-2000.06.11-19.46.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here is a summary of my current thinking:

Processor: AMD Elan SC520 with a optional AMD 186CC.
The 186CC would do AX.25 - four ports.
Memory of 16M to 256M bytes (1M for 186CC).

LAN: 10/100 mb Ethernet
On air protocol: ATM.

Transmission in time slots with the central site being the arbiter of the time.
Point to point links could automagically scale to hub / star topologies.
Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
Modulation: 16 QAM.
Data Rate: 12 Million Symbols per Second.
Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
bandwidth,
I am looking into DSSS of the carrier, but that is rather "problematic". :>
The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
thruput.

I think the thing (I call it TOS (TNC On Steroids) would fit on a 20 to 30
sq inch board.

Any interest?

:>

73 de KN6TD

At 02:14 PM 6/11/00 -0700, you wrote:
>On Sun, Jun 11, 2000 at 01:58:11PM -0700, Derek Lassen wrote:
> > I'd love to get into more detail, but I don't think here is the place. But
> > then again the networking SIG seems to be the place, but gets no traffic.
> > Any ssuggestions?
>
>Well if you do it on a different list, can you please give some warning
>so I can go subscribe?
>
>As someone else said, this list is low-traffic anyway, so maybe discussing
>this would "stimulate" something.
>
>I don't have a lot of knowledge to contribute myself, except that I
>would like to do it. Was thinking of one of those links using
>Proxim Symphony cards and dish antennas.
>
>--

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: Broadband for hams?

From: Also-Antal Csaba <antalcs@mail.matav.hu>
Date: Mon, 12 Jun 2000 08:20:40 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90328-2000.06.12-01.24.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Derek Lassen wrote:
>
> Here is a summary of my current thinking:
>
> Processor: AMD Elan SC520 with a optional AMD 186CC.
> The 186CC would do AX.25 - four ports.
> Memory of 16M to 256M bytes (1M for 186CC).
>
> LAN: 10/100 mb Ethernet
> On air protocol: ATM.
> Transmission in time slots with the central site being the arbiter of the time.
> Point to point links could automagically scale to hub / star topologies.
> Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> Modulation: 16 QAM.
> Data Rate: 12 Million Symbols per Second.

symbol rate...

> Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
> bandwidth,
> I am looking into DSSS of the carrier, but that is rather "problematic". :>
> The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
> thruput.

What kind of circuit do you want to use for modulating and demodulating
of the 16QAM ? On the basis of the data you gave you want to use a cable
modem chip made for subscriber side. In this case the FHSS modulation is

almost possible to realize in normal datarate because these chips do not
function in burst mode. It losts the signal after every frequency
change so it starts a new acquisition process. it takes for one or two
seconds in good receiving conditions. It is the same in Tx/Rx.

udv
Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 12 Jun 2000 00:46:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90340-2000.06.12-02.51.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The most promising device so far is the Intel 2176 (was Stanford Telecom).

At 08:20 AM 6/12/00 +0200, you wrote:

>Derek Lassen wrote:
> >
> > Here is a summary of my current thinking:
> >
> > Processor: AMD Elan SC520 with a optional AMD 186CC.
> > The 186CC would do AX.25 - four ports.
> > Memory of 16M to 256M bytes (1M for 186CC).
> >
> > LAN: 10/100 mb Ethernet
> > On air protocol: ATM.
> > Transmission in time slots with the central site being the arbiter of
> the time.
> > Point to point links could automagically scale to hub / star topologies.
> > Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> > Modulation: 16 QAM.
> > Data Rate: 12 Million Symbols per Second.
>
>symbol rate...

?????

> > Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
> > bandwidth,
> > I am looking into DSSS of the carrier, but that is rather "problematic". :>
> > The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
> > thruput.
>
>What kind of circuit do you want to use for modulating and demodulating
>of the 16QAM ? On the basis of the data you gave you want to use a cable
>modem chip made for subscriber side. In this case the FHSS modulation is
>almost possible to realize in normal datarate because these chips do not
>function in burst mode. It losts the signal after every frequency
>change so it starts a new acquisition process. it takes for one or two
>seconds in good receiving conditions. It is the same in Tx/Rx.
>
>udv
>Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] RE: Broadband for hams?

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 12 Jun 2000 07:17:53 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90359-2000.06.12-06.25.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lee:
I would like to see this taken to a common approach for both voice and
data, i.e. a site that functions as both a voice repeater and data access
point. The proliferation of old repeater technologies to support a couple

of users seems to be the norm here in Florida, so for example it is very
hard to get a 440 freq, they have started assigning our packet freqs for
repeaters.

There is a group of us here who would dearly like to see some sort of
CDMA type approach to voice/data, but so far we are stuck with solutions
which are not a real response to this issue.

I also believe that if we could get a digital system up and running which
would handle voice we would get support from the voice only side of
the house, but that part which is interested in new technologies and
would get on board in order to play with the new boxes.

At the same time those of us who operate the packet network would
get much higher speed links and RF POP's.

My belief is that unless we get a larger part of the ham population
involved we will never get this off the ground.

> -----Original Message-----
> From: Lee810@aol.com [SMTP:Lee810@aol.com]
> Sent: Sunday, June 11, 2000 13:39
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Broadband for hams?
>
> The most recent 'lively' discussion on the amsat-bb was related to further
>
> promoting digital communications which generated more than 60 responses.
> (entitled "Going Digital....Ham Radio?)
>
> In reading through the responses, it seems that some folks believe that we
>
> should just stick to what we have because it's 'good enough' for what hams
>
> need, i.e., simple, low bandwidth digital communications and that's
> certainly
> true for modes like APRS and PSK31. But ever since I've read the keynote
> speech by Lyle Johnson at the 1996 Digital Communications Conference
> (http://www.tapr.org/tapr/html/Flyle.banquet.html), which I highly
> recommend,
> I've been wondering if hams will ever be able to 'advance the radio art'
> with
> respect to broadband digital communications. I have subscribed to the
> TAPR
> spread spectrum email list and it is almost without any discussion. (I
> will
> cross post this message for the sake of trying to stimulate some). I am
> not
> talking about technological advances, but rather having access to
> something
> for which the rest of the world will have to wait, the way we did with
> repeaters, phone patches, HTs, satellite communications, email (via
> packet),
> etc.
>
> I ran across a web site today (http://www.midcoast.net/wirelessfaq.html)
> that
> is just full of information generated by a local ISP who is quietly
> beating
> us to the 2.4 Ghz band with non-licensed power levels and antennas. Just
> think of what we could do if we were able to pool together our resources
> and
> co-locate a broadband connection with an existing repeater tower. We
> could
> have high speed, persistent Internet connections for any hams within line
> of
> sight of the repeater. This would be especially nice for those of us who
> live far enough from town that DSL or even cable modems are never going to
> be
> an option. Maybe this violates the 'spirit of ham radio'...but it seems
> silly to share spectrum with commercial services and deny ourselves the
> same
> privileges that non-licensed users enjoy. The main benefit for us is that
> we
> could have better power and antenna systems (and hence greater distance).
> We
> could have portable broadband Internet connections years before anyone
> else.

>
> The problem in moving forward may stem from the 'no commercial' activity
> of
> ham radio. Accessing a manufacturer's web site presumably would violate
> that
> rule. Reading email has similar problems if the sender is not a ham.
> However, unlicensed operators are utilizing the same frequencies with no
> restrictions. Why are we holding ourselves back? It would be fairly easy
> to
> police against abuses, by periodically monitoring activity logs and
> preventing resource hogging amongst the ranks of our members.
>
> For all I know, there may be some hams doing just this but perhaps are
> reluctant to speak about it publicly for fear of stirring up a hornet's
> nest
> with respect to the non-commercial policy we have with ham radio. I know
> that even suggesting Internet email access through packet got a lot of
> people
> in an uproar because of the third party traffic implications. This
> thinking
> is based on the scarcity principle of bandwidth. Well, how scarce are the
>
> microwave bands we are not even utilizing?
>
> I realize that this message was a bit 'off topic' for the satellite group,
> so
> if anyone has a problem with that, we can just move it in the spread
> spectrum
> group. If you don't have access to the TAPR ss group, you can join
> without
> worrying about getting a ton of email. The ss group generates only a few
> email messages a month.
>
> 73,
>
> Lee Devlin, KØLEE (K0LEE)
> Greeley, CO
> http://members.aol.com/lee810/ham.html
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Broadcom, broadband, etc.

From: Robert McGwier <rwmcgwier@home.com>
Date: Mon, 12 Jun 2000 07:53:14 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90368-2000.06.12-06.56.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

www.broadcom.com

has an up to 256 QAM transceiver which is used in
cable modems and digital cable TV transceivers.

The part is cheap (about $100 in amateur quantities, an
eval board costs $200-ish). With an FPGA attached (Xilinx,
1 Mega gate) one is able to do a ton of stuff, including
FEC, put in a n-FSK modem, etc. Very interesting
stuff. Hams are not able to contribute anything at all
given the current needs of consumers for these kinds of
parts. My company which has been paying tens of
thounsands for modems like these is now going to pay
about $5000 per copy for the same capability. This
is not the last offering (part) in this area and with more
stuff being crammed down our cable/fibres, these devices
will become more widespread, capable, and cheaper. At 256
QAM, and with Reed Solomon and FEC, 16 mbps DATA
rate seems easily achievable.   You get about 32+ feedforward
and 32+ feedback taps in an FFE/DFE equalizer built into
the thing with a very acceptable symbol error rate
in these tests I've participated in, even on multiple ray
multipath.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: Broadband for hams?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Mon, 12 Jun 2000 13:10:08 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90510-2000.06.12-13.17.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We are already doing it. And so are others.

http://www.qsl.net/kb9mwr/projects/wireless/plan.html

Steve Lampereur, KB9MWR

> I ran across a web site today (http://www.midcoast.net/wirelessfaq.html) that
> is just full of information generated by a local ISP who is quietly beating
> us to the 2.4 Ghz band with non-licensed power levels and antennas. Just
> think of what we could do if we were able to pool together our resources and
> co-locate a broadband connection with an existing repeater tower. We could
> have high speed, persistent Internet connections for any hams within line of
> sight of the repeater. This would be especially nice for those of us who
> live far enough from town that DSL or even cable modems are never going to be
> an option. Maybe this violates the 'spirit of ham radio'...but it seems
> silly to share spectrum with commercial services and deny ourselves the same
> privileges that non-licensed users enjoy. The main benefit for us is that we
> could have better power and antenna systems (and hence greater distance). We
> could have portable broadband Internet connections years before anyone else.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: Broadcom, broadband, etc.

From: Also-Antal Csaba <antalcs@mail.matav.hu>
Date: Mon, 12 Jun 2000 20:07:22 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90513-2000.06.12-13.23.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Robert McGwier wrote:
>
> www.broadcom.com
>
> has an up to 256 QAM transceiver which is used in
> cable modems and digital cable TV transceivers.
>
We have already tried to buy cable modem chips from that company, we
wrote an NDA and we got the documentation about the chips. When we
wanted to order for our development, they said that we could not order
any chips without buying the eval board (costed §2000-14000).
The other big problem is that each function is done with a separate chip
still the STE-2176 includes all these function and it is very cheap.

> The part is cheap (about $100 in amateur quantities, an
> eval board costs $200-ish). With an FPGA attached (Xilinx,
> 1 Mega gate) one is able to do a ton of stuff, including
> FEC, put in a n-FSK modem, etc. Very interesting
> stuff. Hams are not able to contribute anything at all
> given the current needs of consumers for these kinds of
> parts. My company which has been paying tens of
> thounsands for modems like these is now going to pay
> about $5000 per copy for the same capability. This
> is not the last offering (part) in this area and with more
> stuff being crammed down our cable/fibres, these devices
> will become more widespread, capable, and cheaper. At 256
> QAM, and with Reed Solomon and FEC, 16 mbps DATA
> rate seems easily achievable.   You get about 32+ feedforward
> and 32+ feedback taps in an FFE/DFE equalizer built into
> the thing with a very acceptable symbol error rate
> in these tests I've participated in, even on multiple ray
> multipath.

The 16 QAM needs 14 dB SNR, 256 QAM needs about 40 dB SNR with the same
BER.

udv
Csaba
> ---
> You are currently subscribed to ss as: antalcs@mail.matav.hu
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: Broadband for hams?

From: Also-Antal Csaba <antalcs@mail.matav.hu>
Date: Mon, 12 Jun 2000 20:20:13 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90512-2000.06.12-13.23.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Derek Lassen wrote:
>
> The most promising device so far is the Intel 2176 (was Stanford Telecom).

It is.Do you have working register set for these chip? We use this chip
on our own wireless isp card development. This time we have isa type
card,
with these chips, xcs20 and some ram. The final product works on
external
device with sc400 +usb/eth +linux. On the basis of my idea we use this
chip for sending and
receiving data with 16qam modulation. We can modulate the output wave.
But the receiver can't go into acquisition state if we modulate random
data,
or switch on the scambler. This chip can lock to the signal about
1-2sec.

> > > Point to point links could automagically scale to hub / star topologies.
> > > Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> > > Modulation: 16 QAM.
> > > Data Rate: 12 Million Symbols per Second.
> >
> >symbol rate...
>
> ?????

The 16qam is 4 simultanous bit in one symbol. The 12 megasymbol is
4*12MHz -> 48MBps and this is a date rate. You wrote this in your first
mail. The doc
guarants max 165megz masterclock, we can drive succesful this chip on
320MHz.

udv
Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 12 Jun 2000 15:28:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90577-2000.06.12-17.37.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 08:20 PM 6/12/00 +0200, you wrote:

>Derek Lassen wrote:
> >
> > The most promising device so far is the Intel 2176 (was Stanford Telecom).
>
>It is.Do you have working register set for these chip? We use this chip

I have the data book from Stel and the (essentially same) pdf form from
Intel. If you don't already have it, go to
ftp://download.intel.com/design/cable/datashts/24537601.pdf

>on our own wireless isp card development. This time we have isa type
>card,
>with these chips, xcs20 and some ram. The final product works on
>external
>device with sc400 +usb/eth +linux. On the basis of my idea we use this
>chip for sending and
>receiving data with 16qam modulation. We can modulate the output wave.
For those who may not know:
The SC400 and SC520 are AMD high integration x86 processors. Just add RAM,
ROM and an OS. The SC400 has a 486 class processor and generates a 16 bit
bus. The SC520 has a Pentium class processor and generates a PCI bus, which
I need, because I intend to do the RF protocol with a PCI based ATM chip
(IDT 77252 ATM SAR). The 10/100M bps Ethernet and HiFN 7751 compression
processor are on the PCI bus as well.

>But the receiver can't go into acquisition state if we modulate random
>data,
>or switch on the scambler. This chip can lock to the signal about
>1-2sec.
One or two *seconds* ?!?!?!?!?!?!
There is something really, really, badly wrong.
I am under the impression that the receiver should lock within a few symbols!
My protocol plans call for bursts of less than 10 milliseconds.

> > > > Point to point links could automagically scale to hub / star
> topologies.
> > > > Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> > > > Modulation: 16 QAM.
> > > > Data Rate: 12 Million Symbols per Second.
> > > >
> > >symbol rate...
> >
> > ?????
>
>The 16qam is 4 simultanous bit in one symbol. The 12 megasymbol is
>4*12MHz -> 48MBps and this is a date rate. You wrote this in your first
>mail. The doc

Yes. 48M bps before FEC.

>guarants max 165megz masterclock, we can drive succesful this chip on
>320MHz.

No shit? Now, that's what I call conservative! Maybe the final critter
could do something like 25M bps thru put?

How do you do it? Feed 66 MHz where the 25 MHz reference is supposed to go?

>udv
>Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] Re: Broadcom, broadband, etc.

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 12 Jun 2000 15:32:18 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90578-2000.06.12-17.37.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

They wouldn't even talk to me.
And I asked real nice.
:)

At 08:07 PM 6/12/00 +0200, you wrote:

>Robert McGwier wrote:
> >
> > www.broadcom.com

> >
> > has an up to 256 QAM transceiver which is used in
> > cable modems and digital cable TV transceivers.
> >
>We have already tried to buy cable modem chips from that company, we
>wrote an NDA and we got the documentation about the chips. When we
>wanted to order for our development, they said that we could not order
>any chips without buying the eval board (costed §2000-14000).
>The other big problem is that each function is done with a separate chip
>still the STE-2176 includes all these function and it is very cheap.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] - Re: Broadband for hams?

From: "Hall, Daniel Ross" <Daniel.Hall@dsto.defence.gov.au>
Date: Tue, 13 Jun 2000 12:01:33 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90632-2000.06.12-23.10.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

QAM waveforms dont have a huge carrier component (when data is being sent)
and you need to use a costas loop circuit to lock onto the phase of the
carrier (rather than a PLL) - from memory this does take a second or so to
happen.

Dan.

-----Original Message-----
From: Derek Lassen [mailto:kn6td@clubnet.net]
Sent: Tuesday, 13 June 2000 7:59
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Broadband for hams?

At 08:20 PM 6/12/00 +0200, you wrote:

>Derek Lassen wrote:
> >
> > The most promising device so far is the Intel 2176 (was Stanford
Telecom).
>
>It is.Do you have working register set for these chip? We use this chip

I have the data book from Stel and the (essentially same) pdf form from
Intel. If you don't already have it, go to
ftp://download.intel.com/design/cable/datashts/24537601.pdf

>on our own wireless isp card development. This time we have isa type
>card,
>with these chips, xcs20 and some ram. The final product works on
>external
>device with sc400 +usb/eth +linux. On the basis of my idea we use this
>chip for sending and
>receiving data with 16qam modulation. We can modulate the output wave.
For those who may not know:
The SC400 and SC520 are AMD high integration x86 processors. Just add RAM,
ROM and an OS. The SC400 has a 486 class processor and generates a 16 bit
bus. The SC520 has a Pentium class processor and generates a PCI bus, which
I need, because I intend to do the RF protocol with a PCI based ATM chip
(IDT 77252 ATM SAR). The 10/100M bps Ethernet and HiFN 7751 compression
processor are on the PCI bus as well.

>But the receiver can't go into acquisition state if we modulate random
>data,
>or switch on the scambler. This chip can lock to the signal about
>1-2sec.
One or two *seconds* ?!?!?!?!?!?!
There is something really, really, badly wrong.
I am under the impression that the receiver should lock within a few
symbols!
My protocol plans call for bursts of less than 10 milliseconds.

> > > > Point to point links could automagically scale to hub / star

> topologies.
> > > > Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum
Whitening).
> > > > Modulation: 16 QAM.
> > > > Data Rate: 12 Million Symbols per Second.
> > > >
> > >symbol rate...
> >
> > ?????
>
>The 16qam is 4 simultanous bit in one symbol. The 12 megasymbol is
>4*12MHz -> 48MBps and this is a date rate. You wrote this in your first
>mail. The doc

Yes. 48M bps before FEC.

>guarants max 165megz masterclock, we can drive succesful this chip on
>320MHz.

No shit? Now, that's what I call conservative! Maybe the final critter
could do something like 25M bps thru put?

How do you do it? Feed 66 MHz where the 25 MHz reference is supposed to go?

>udv
>Csaba

You are currently subscribed to ss as: daniel.hall@dsto.defence.gov.au
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] Re: Broadband for hams?

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Tue, 13 Jun 2000 00:19:33 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90635-2000.06.12-23.31.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Although a someone or team out there might be able to produce the modem
described in the mail attached below, the system and software effort
is massive and probably results in less performance and existing
$150 products...soon to fall to $50.

I think hams would better spend their time with antennas, linking,
feedlines,
amplifiers, and frequency changing instead of the complexities of modulation
structure and software.

We can get about the same performance from an 802.11b wireless lan card.
    11M bps at 2.4 GHz
    Standardized and interoperable across manufacturers
    pc-card interface to processor, ISA and PCI bus adapters available
    Voice, video, data interface capability
    Centralized ("infrastructure") and Ad-hoc (peer to peer) networking
    Works with Linux, Windows, etc, etc.

Good wireless lan cards include
    Lucent Wavelan, and Prism chipset based, see
        http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/
    for a lot of good info besides the linux drivers

The units put out about 50-100 mW, amplifiers available,
    http://www.ydi.com/a2440.htm,
    http://www.teletronics.com/Products/Amplifiers/2400MHz/smartamp2400.htm

Ranges at 100 mw
    100 ft advertised
    700 ft free space with 0 dB antenna
    3.5 Miles with 14 dBi at each end (24")

VE3JF put together a list of links...a bit dated now but interesting
    http://hydra.carleton.ca/info/2400tbl.html

For the hacker^H^H^H^H^H^H^H ham, it possible to build a card from scratch
using the Intersil Prism II chip set, see
http://www.intersil.com/prism/11mbps.asp

Hams might also consider embedded the wireless lan card in a microwave
transmitter
using the 2.4 GHz signals as the exciter.

At my work, we hacked the prism cards to access the 240 MHz IF on one
product
and generated a 5.8 GHz data link using prisms on another project.

food for thought,

jeff, wa1hco

----- Original Message -----
From: "Derek Lassen" <kn6td@clubnet.net>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Sunday, June 11, 2000 8:41 PM
Subject: [ss] Re: Broadband for hams?

> Here is a summary of my current thinking:
>
> Processor: AMD Elan SC520 with a optional AMD 186CC.
> The 186CC would do AX.25 - four ports.
> Memory of 16M to 256M bytes (1M for 186CC).
>
> LAN: 10/100 mb Ethernet
> On air protocol: ATM.
> Transmission in time slots with the central site being the arbiter of the
time.
> Point to point links could automagically scale to hub / star topologies.
> Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> Modulation: 16 QAM.
> Data Rate: 12 Million Symbols per Second.
> Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
> bandwidth,
> I am looking into DSSS of the carrier, but that is rather "problematic".
:>
> The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
> thruput.
>
> I think the thing (I call it TOS (TNC On Steroids) would fit on a 20 to 30
> sq inch board.
>
> Any interest?
>
> :>
>
> 73 de KN6TD
>
>
> At 02:14 PM 6/11/00 -0700, you wrote:
> >On Sun, Jun 11, 2000 at 01:58:11PM -0700, Derek Lassen wrote:
> > > I'd love to get into more detail, but I don't think here is the place.
But
> > > then again the networking SIG seems to be the place, but gets no
traffic.
> > > Any ssuggestions?
> >
> >Well if you do it on a different list, can you please give some warning
> >so I can go subscribe?
> >
> >As someone else said, this list is low-traffic anyway, so maybe
discussing
> >this would "stimulate" something.
> >
> >I don't have a lot of knowledge to contribute myself, except that I
> >would like to do it. Was thinking of one of those links using
> >Proxim Symphony cards and dish antennas.
> >
> >--
>
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM

> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: Broadband for hams?

From: Also-Antal Csaba <antalcs@mail.matav.hu>
Date: Tue, 13 Jun 2000 07:17:03 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90656-2000.06.13-00.21.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> >It is.Do you have working register set for these chip? We use this chip
>
> I have the data book from Stel and the (essentially same) pdf form from
> Intel. If you don't already have it, go to
> ftp://download.intel.com/design/cable/datashts/24537601.pdf

We get these doc-s from stel, but these are not enough. If you look this
doc you can see many missing data, and not documented function.

> For those who may not know:
> The SC400 and SC520 are AMD high integration x86 processors. Just add RAM,
> ROM and an OS. The SC400 has a 486 class processor and generates a 16 bit
> bus. The SC520 has a Pentium class processor and generates a PCI bus, which
> I need, because I intend to do the RF protocol with a PCI based ATM chip
> (IDT 77252 ATM SAR). The 10/100M bps Ethernet and HiFN 7751 compression
> processor are on the PCI bus as well.

The sc400 can work with 32bit vesa local bus. But we don't need this.
The sc400 work well with isa bus, we only would like to put on cheap isa
type ethernet card.

> >But the receiver can't go into acquisition state if we modulate random
> >data,
> >or switch on the scambler. This chip can lock to the signal about
> >1-2sec.
> One or two *seconds* ?!?!?!?!?!?!
> There is something really, really, badly wrong.

If the SNR is about 20dB, it locks in shorter time, but they do not take
for a few symbols. Before the chip locks it tunes its own filters so as
to get better performance.

> I am under the impression that the receiver should lock within a few symbols!
> My protocol plans call for bursts of less than 10 milliseconds.

This will work if you use headend receiver.

> >guarants max 165megz masterclock, we can drive succesful this chip on
> >320MHz.
>
> No shit? Now, that's what I call conservative! Maybe the final critter
> could do something like 25M bps thru put?
>
> How do you do it? Feed 66 MHz where the 25 MHz reference is supposed to go?

We use 10MHz xtal, the on chip pll multiplier makes this clock rate from
M/N value. When the chip runs on in normal 144MHz master clock then the
temperature is 50C. If we make this on 320MHz then it will be really
hot.
It can work steadily for hours.

udv
Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

19. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 12 Jun 2000 23:30:35 -0700

To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90674-2000.06.13-01.35.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes.

Except for one very big problem.

The 802.11 cards are trying to emulate a hardwired cable link with a
variable RF link.
Great if you want to link to your bud's house 'cause you are to cheap to
buy a DSL line.

This does not scale well, and will never work beyond a few nodes.

I am trying to build something that will work with hundreds to thousands of
nodes. I regard 802.11 as the CB of Ham RF networking. The routing is where
I am interested in working. But the pipe has to be worthy of the effort.

I am also looking ahead to when the repeater is not on a 8000 foot tall
tower, but on one that is 117,744,000 feet tall. :>

I am not the kind of ham that is content with the latest appliance. Even if
it does do what I want it to do.

(Little red hen story comes to mind)

73 de KN6TD

At 12:19 AM 6/13/00 -0400, you wrote:
>Although a someone or team out there might be able to produce the modem
>described in the mail attached below, the system and software effort
>is massive and probably results in less performance and existing
>$150 products...soon to fall to $50.
>
>I think hams would better spend their time with antennas, linking,
>feedlines,
>amplifiers, and frequency changing instead of the complexities of modulation
>structure and software.
>
>We can get about the same performance from an 802.11b wireless lan card.
>   11M bps at 2.4 GHz
>   Standardized and interoperable across manufacturers
>   pc-card interface to processor, ISA and PCI bus adapters available
>   Voice, video, data interface capability
>   Centralized ("infrastructure") and Ad-hoc (peer to peer) networking
>   Works with Linux, Windows, etc, etc.
>
>Good wireless lan cards include
>   Lucent Wavelan, and Prism chipset based, see
>   http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/
>   for a lot of good info besides the linux drivers
>
>The units put out about 50-100 mW, amplifiers available,
>   http://www.ydi.com/a2440.htm,
>   http://www.teletronics.com/Products/Amplifiers/2400MHz/smartamp2400.htm
>
>Ranges at 100 mw
>   100 ft advertised
>   700 ft free space with 0 dB antenna
>   3.5 Miles with 14 dBi at each end (24")
>
>VE3JF put together a list of links...a bit dated now but interesting
>   http://hydra.carleton.ca/info/2400tbl.html
>
>For the hacker^H^H^H^H^H^H^H ham, it possible to build a card from scratch
>using the Intersil Prism II chip set, see
>http://www.intersil.com/prism/11mbps.asp
>
>Hams might also consider embedded the wireless lan card in a microwave
>transmitter
>using the 2.4 GHz signals as the exciter.
>
>At my work, we hacked the prism cards to access the 240 MHz IF on one
>product
>and generated a 5.8 GHz data link using prisms on another project.
>
>food for thought,
>
>jeff, wa1hco

>
>----- Original Message -----
>From: "Derek Lassen" <kn6td@clubnet.net>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Sent: Sunday, June 11, 2000 8:41 PM
>Subject: [ss] Re: Broadband for hams?
>
>
> > Here is a summary of my current thinking:
> >
> > Processor: AMD Elan SC520 with a optional AMD 186CC.
> > The 186CC would do AX.25 - four ports.
> > Memory of 16M to 256M bytes (1M for 186CC).
> >
> > LAN: 10/100 mb Ethernet
> > On air protocol: ATM.
> > Transmission in time slots with the central site being the arbiter of the
>time.
> > Point to point links could automagically scale to hub / star topologies.
> > Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> > Modulation: 16 QAM.
> > Data Rate: 12 Million Symbols per Second.
> > Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
> > bandwidth,
> > I am looking into DSSS of the carrier, but that is rather "problematic".
>:>
> > The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
> > thruput.
> >
> > I think the thing (I call it TOS (TNC On Steroids) would fit on a 20 to 30
> > sq inch board.
> >
> > Any interest?
> >
> > :>
> >
> > 73 de KN6TD
> >
> >
> > At 02:14 PM 6/11/00 -0700, you wrote:
> > >On Sun, Jun 11, 2000 at 01:58:11PM -0700, Derek Lassen wrote:
> > > > I'd love to get into more detail, but I don't think here is the place.
>But
> > > > then again the networking SIG seems to be the place, but gets no
>traffic.
> > > > Any ssuggestions?
> > >
> > >Well if you do it on a different list, can you please give some warning
> > >so I can go subscribe?
> > >
> > >As someone else said, this list is low-traffic anyway, so maybe
>discussing
> > >this would "stimulate" something.
> > >
> > >I don't have a lot of knowledge to contribute myself, except that I
> > >would like to do it. Was thinking of one of those links using
> > >Proxim Symphony cards and dish antennas.
> > >
> > >--
> >
> >
> >
> > ---
> > You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 12 Jun 2000 23:35:15 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90675-2000.06.13-01.39.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:17 AM 6/13/00 +0200, you wrote:

> > >It is.Do you have working register set for these chip? We use this chip
> > >
> > I have the data book from Stel and the (essentially same) pdf form from
> > Intel. If you don't already have it, go to
> > ftp://download.intel.com/design/cable/datashts/24537601.pdf
> >
>We get these doc-s from stel, but these are not enough. If you look this
>doc you can see many missing data, and not documented function.

No. you GOT them. Stel sold all of this stuff to intel.

> > For those who may not know:
> > The SC400 and SC520 are AMD high integration x86 processors. Just add RAM,
> > ROM and an OS. The SC400 has a 486 class processor and generates a 16 bit
> > bus. The SC520 has a Pentium class processor and generates a PCI bus, which
> > I need, because I intend to do the RF protocol with a PCI based ATM chip
> > (IDT 77252 ATM SAR). The 10/100M bps Ethernet and HiFN 7751 compression
> > processor are on the PCI bus as well.
> >
>The sc400 can work with 32bit vesa local bus. But we don't need this.
>The sc400 work well with isa bus, we only would like to put on cheap isa
>type ethernet card.

Not enough responsiveness on ISA.

> > >But the receiver can't go into acquisition state if we modulate random
> > >data,
> > >or switch on the scambler. This chip can lock to the signal about
> > >1-2sec.
> > One or two *seconds* ?!?!?!?!?!?!
> > There is something really, really, badly wrong.
> >
>If the SNR is about 20dB, it locks in shorter time, but they do not take
>for a few symbols. Before the chip locks it tunes its own filters so as
>to get better performance.
> >
> > I am under the impression that the receiver should lock within a few
> symbols!
> > My protocol plans call for bursts of less than 10 milliseconds.
> >
>This will work if you use headend receiver.
> >
> > >guarants max 165megz masterclock, we can drive succesful this chip on
> > >320MHz.
> > >
> > No shit? Now, that's what I call conservative! Maybe the final critter
> > could do something like 25M bps thru put?
> > >
> > How do you do it? Feed 66 MHz where the 25 MHz reference is supposed to go?
> >
>We use 10MHz xtal, the on chip pll multiplier makes this clock rate from
>M/N value. When the chip runs on in normal 144MHz master clock then the
>temperature is 50C. If we make this on 320MHz then it will be really
>hot.
>It can work steadily for hours.

Except that it has errors. Have you run it at normal speed and still cant
get it to lock up in a few symbols?

>udv
>Csaba
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] FW: [amsat-bb] Broadband for hams?

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Tue, 13 Jun 2000 11:35:32 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90676-2000.06.13-02.25.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here's an email I wrote just before I subscribed to the list. The subject
is the future of digital ham radio, a thread that's been going on a while in
AMSAT circles.

Tony Langdon.
Systems Development and Support.
ATC Training Australasia. Level 2 321 Exhibition St Melbourne 3000.
Phone: 1300 13 1983   WWW: http://www.atctraining.com.au

-----Original Message-----
From: Tony Langdon
Sent: Tuesday, 13 June 2000 9:51
To: 'Lee810@aol.com'
Subject: RE: [amsat-bb] Broadband for hams?

> The most recent 'lively' discussion on the amsat-bb was
> related to further
> promoting digital communications which generated more than 60
> responses.
> (entitled "Going Digital....Ham Radio?)

Guess it's one area some people still have problems with. :-) The amount of
activity is a good sign though. people care. :-)

> In reading through the responses, it seems that some folks
> believe that we
> should just stick to what we have because it's 'good enough'
> for what hams
> need, i.e., simple, low bandwidth digital communications and
> that's certainly
> true for modes like APRS and PSK31. But ever since I've read
> the keynote
> speech by Lyle Johnson at the 1996 Digital Communications Conference

I'm more for advancing the art, and doing something different. Sure, keep
what we've got, but we have to go places too.

> (http://www.tapr.org/tapr/html/Flyle.banquet.html), which I
> highly recommend,
> I've been wondering if hams will ever be able to 'advance the
> radio art' with
> respect to broadband digital communications. I have
> subscribed to the TAPR
> spread spectrum email list and it is almost without any
> discussion. (I will
> cross post this message for the sake of trying to stimulate
> some). I am not
> talking about technological advances, but rather having
> access to something
> for which the rest of the world will have to wait, the way we
> did with
> repeaters, phone patches, HTs, satellite communications,
> email (via packet),
> etc.

I tend to agree. I see a lot of potential in voice over IP technology, and
(unbeknown to 99% of hams) are actually in a good position to make it work
really well. It's a case of we have the advantage that the network
doesn't exist (yet), which means we can spec the network to suit our needs
(maybe IPv6 as the network protocol, or at least IPv4 multicast, you get the
drift). The end result is that certain types of traffic can flow more
efficiently on our network than they can on the existing Internet.

And what would one do with a wireless IP voice link? Sure, you could load

up Iphone and have a chat (I know how to make Iphone work with a non
Vocaltec server - it's just an IRC server, and you just need to tweak the
Registry... :)). But more exciting is the possibility for integration with
the voice repeater network. With multicast technology, it is feasible to
link repeaters on an ad-hoc basis, and even connect in fully digital users,
on a "virtual repeater", all without bogging the network down with duplicate
copies of the same data. Multicast is the key to this magic. Same goes for
digital ATV. Modern compression algorithms can get a reasonable picture in
56kbps. And that one 56kbps channel can then be distributed to any randomly
selected group of stations, regardless of where they are on the network. If
one of the stations is an ATV trepeater, it can also be viewed by TV viewers
in the repeater's coverage area...

>
> I ran across a web site today
> (http://www.midcoast.net/wirelessfaq.html) that
> is just full of information generated by a local ISP who is
> quietly beating
> us to the 2.4 Ghz band with non-licensed power levels and
> antennas. Just

This is starting to happen here, and hobbyist groups are experimenting with
2.4 GHz wireless networking. As an example, take a look at
http://www.air.net.au. These guys should be on the ham bands playing with
real WANs. :-)

> think of what we could do if we were able to pool together
> our resources and
> co-locate a broadband connection with an existing repeater
> tower. We could
> have high speed, persistent Internet connections for any hams
> within line of
> sight of the repeater. This would be especially nice for
> those of us who
> live far enough from town that DSL or even cable modems are
> never going to be
> an option. Maybe this violates the 'spirit of ham
> radio'...but it seems
> silly to share spectrum with commercial services and deny
> ourselves the same
> privileges that non-licensed users enjoy. The main benefit
> for us is that we
> could have better power and antenna systems (and hence
> greater distance). We
> could have portable broadband Internet connections years
> before anyone else.

I see Internet connections as a potential minefield that could have all
sorts of ramifications. I'd say give the Internet a miss at this stage, and
re-evaluate that down the track. It could work, however, with a loosening
of the regulations, and a charter similar to that of APANA, which is a non
profit networking group for hobbyists (sort of like a networking club, which
currently uses conventional wired technology). Http://www.apana.org.au for
more information on that one. :)

>
> The problem in moving forward may stem from the 'no
> commercial' activity of
> ham radio. Accessing a manufacturer's web site presumably
> would violate that
> rule. Reading email has similar problems if the sender is not a ham.
> However, unlicensed operators are utilizing the same
> frequencies with no
> restrictions. Why are we holding ourselves back? It would
> be fairly easy to
> police against abuses, by periodically monitoring activity logs and
> preventing resource hogging amongst the ranks of our members.

A suitable set of rules would help here.

> I realize that this message was a bit 'off topic' for the
> satellite group, so
> if anyone has a problem with that, we can just move it in the
> spread spectrum
> group. If you don't have access to the TAPR ss group, you
> can join without
> worrying about getting a ton of email. The ss group
> generates only a few
> email messages a month.

I might have to join, and get a few others down here to join. Count me in!
:-)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] Re: Broadband for hams?

From: "Marius Hauki" <Marius.Hauki@datarespons.no>
Date: Tue, 13 Jun 2000 09:47:44 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90677-2000.06.13-02.52.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Derek,
do you have a prototype up and running with thew SC520 ?

73 DE LA9EEA
Marius

Derek Lassen wrote:

> Here is a summary of my current thinking:
>
> Processor: AMD Elan SC520 with a optional AMD 186CC.
> The 186CC would do AX.25 - four ports.
> Memory of 16M to 256M bytes (1M for 186CC).
>
> LAN: 10/100 mb Ethernet
> On air protocol: ATM.
> Transmission in time slots with the central site being the arbiter of the time.
> Point to point links could automagically scale to hub / star topologies.
> Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> Modulation: 16 QAM.
> Data Rate: 12 Million Symbols per Second.
> Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
> bandwidth,
> I am looking into DSSS of the carrier, but that is rather "problematic". :>
> The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
> thruput.
>
> I think the thing (I call it TOS (TNC On Steroids) would fit on a 20 to 30
> sq inch board.
>
> Any interest?
>
> :>
>
> 73 de KN6TD
>
> At 02:14 PM 6/11/00 -0700, you wrote:
> >On Sun, Jun 11, 2000 at 01:58:11PM -0700, Derek Lassen wrote:
> > > I'd love to get into more detail, but I don't think here is the place. But
> > > then again the networking SIG seems to be the place, but gets no traffic.
> > > Any ssuggestions?
> >
> >Well if you do it on a different list, can you please give some warning
> >so I can go subscribe?
> >
> >As someone else said, this list is low-traffic anyway, so maybe discussing
> >this would "stimulate" something.
> >
> >I don't have a lot of knowledge to contribute myself, except that I
> >would like to do it. Was thinking of one of those links using
> >Proxim Symphony cards and dish antennas.
> >
> >--
>
> ---
> You are currently subscribed to ss as: MARIUS@DATARESPONS.NO
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] Re: Broadband for hams?

From: Derek Lassen <kn6td@clubnet.net>
Date: Tue, 13 Jun 2000 01:09:35 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90680-2000.06.13-03.14.05--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

No.
The guy who was to do the PC board up and got married.
His current list of honneydos doesn't include board layout.

At 09:47 AM 6/13/00 +0200, you wrote:
>Derek,
>do you have a prototype up and running with thew SC520 ?
>
>73 DE LA9EEA
>Marius
>
>
>
>Derek Lassen wrote:
>
> > Here is a summary of my current thinking:
> >
> > Processor: AMD Elan SC520 with a optional AMD 186CC.
> > The 186CC would do AX.25 - four ports.
> > Memory of 16M to 256M bytes (1M for 186CC).
> >
> > LAN: 10/100 mb Ethernet
> > On air protocol: ATM.
> > Transmission in time slots with the central site being the arbiter of
> the time.
> > Point to point links could automagically scale to hub / star topologies.
> > Lots of FEC (Reed/Solomon,Trellis / Viterbi, and Spectrum Whitening).
> > Modulation: 16 QAM.
> > Data Rate: 12 Million Symbols per Second.
> > Carrier: Frequency Hopped Spread Spectrum on 10 GHz, appx 8 MHz occupied
> > bandwidth,
> > I am looking into DSSS of the carrier, but that is rather "problematic". :>
> > The actual on air bit rate would be 48M bps, but FEC drops that to 10M bps
> > thruput.
> >
> > I think the thing (I call it TOS (TNC On Steroids) would fit on a 20 to 30
> > sq inch board.
> >
> > Any interest?
> >
> > :>
> >
> > 73 de KN6TD
> >
> > At 02:14 PM 6/11/00 -0700, you wrote:
> > >On Sun, Jun 11, 2000 at 01:58:11PM -0700, Derek Lassen wrote:
> > > > I'd love to get into more detail, but I don't think here is the
> place. But
> > > > then again the networking SIG seems to be the place, but gets no
> traffic.
> > > > Any ssuggestions?
> > >
> > >Well if you do it on a different list, can you please give some warning
> > >so I can go subscribe?
> > >
> > >As someone else said, this list is low-traffic anyway, so maybe discussing
> > >this would "stimulate" something.
> > >
> > >I don't have a lot of knowledge to contribute myself, except that I
> > >would like to do it. Was thinking of one of those links using
> > >Proxim Symphony cards and dish antennas.
> > >
> > >--
> >
> > ---
> > You are currently subscribed to ss as: MARIUS@DATARESPONS.NO
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] RE: FW: [amsat-bb] Broadband for hams?

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 13 Jun 2000 08:04:00 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90707-2000.06.13-07.11.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Tony is going down the path that a group of us in the Tampa
Bay FL area are interested in. Though my interest is in mainly
data, there is a group here who is interested in doing SS voice,
the greatest interest is in doing some sort of SS voice/data
repeater. My interest is in doing such a device we now have
a common access point for any information which we can
digitize and send over this device, or use the same as a
network access point.

The point being that the voice guys have $$ along with the
DX guys, These people will toss $$ at something if it will give
them a solution to their problem. The interest is there, now
how to get something going that will bring in more interest,
and allow us to build larger facilities. I believe that using
SS instead of conventional narrow band facilities, allows
for much better spectrum usage, and also makes it much
easier to contemplate a series of "back yard" repeater type
devices covering a smaller area, but providing much greater
bandwidth than what is presently offered.

If off of the same repeater/network access point you can
provide voice and data in the same bit stream, the voice
being both access to distant voice systems and a local
repeater, with the ability to selectively call and group people
you now have the ultimate voice machine. And at the same
time a device which provides good bandwidth for data and
a network connection, now it gets even better.

Folks we have the bandwidth but if we do not use it, we
stand to see it sold off.

> -----Original Message-----
> From: Tony Langdon [SMTP:tlangdon@atctraining.com.au]
> Sent: Monday, June 12, 2000 21:36
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] FW: [amsat-bb] Broadband for hams?
>
> Here's an email I wrote just before I subscribed to the list. The subject
> is the future of digital ham radio, a thread that's been going on a while
> in
> AMSAT circles.
>
> Tony Langdon.
> Systems Development and Support.
> ATC Training Australasia. Level 2 321 Exhibition St Melbourne 3000.
> Phone: 1300 13 1983   WWW: http://www.atctraining.com.au
>
>
> -----Original Message-----
> From: Tony Langdon
> Sent: Tuesday, 13 June 2000 9:51
> To: 'Lee810@aol.com'
> Subject: RE: [amsat-bb] Broadband for hams?
>
>
> > The most recent 'lively' discussion on the amsat-bb was
> > related to further
> > promoting digital communications which generated more than 60
> > responses.
> > (entitled "Going Digital....Ham Radio?)

>
> Guess it's one area some people still have problems with. :-) The amount
> of
> activity is a good sign though. people care. :-)
>
> > In reading through the responses, it seems that some folks
> > believe that we
> > should just stick to what we have because it's 'good enough'
> > for what hams
> > need, i.e., simple, low bandwidth digital communications and
> > that's certainly
> > true for modes like APRS and PSK31. But ever since I've read
> > the keynote
> > speech by Lyle Johnson at the 1996 Digital Communications Conference
>
> I'm more for advancing the art, and doing something different. Sure, keep
> what we've got, but we have to go places too.
>
> > (http://www.tapr.org/tapr/html/Flyle.banquet.html), which I
> > highly recommend,
> > I've been wondering if hams will ever be able to 'advance the
> > radio art' with
> > respect to broadband digital communications. I have
> > subscribed to the TAPR
> > spread spectrum email list and it is almost without any
> > discussion. (I will
> > cross post this message for the sake of trying to stimulate
> > some). I am not
> > talking about technological advances, but rather having
> > access to something
> > for which the rest of the world will have to wait, the way we
> > did with
> > repeaters, phone patches, HTs, satellite communications,
> > email (via packet),
> > etc.
>
> I tend to agree. I see a lot of potential in voice over IP technology,
> and
> (unbeknown to 99% of hams) are actually in a good position to make it work
> _really_ well. It's a case of we have the advantage that the network
> doesn't exist (yet), which means we can spec the network to suit our needs
> (maybe IPv6 as the network protocol, or at least IPv4 multicast, you get
> the
> drift). The end result is that certain types of traffic can flow more
> efficiently on our network than they can on the existing Internet.
>
> And what would one do with a wireless IP voice link? Sure, you could load
> up Iphone and have a chat (I know how to make Iphone work with a non
> Vocaltec server - it's just an IRC server, and you just need to tweak the
> Registry... :)). But more exciting is the possibility for integration
> with
> the voice repeater network. With multicast technology, it is feasible to
> link repeaters on an ad-hoc basis, and even connect in fully digital
> users,
> on a "virtual repeater", all without bogging the network down with
> duplicate
> copies of the same data. Multicast is the key to this magic. Same goes
> for
> digital ATV. Modern compression algorithms can get a reasonable picture
> in
> 56kbps. And that one 56kbps channel can then be distributed to any
> randomly
> selected group of stations, regardless of where they are on the network.
> If
> one of the stations is an ATV trepeater, it can also be viewed by TV
> viewers
> in the repeater's coverage area...
>
> >
> > I ran across a web site today
> > (http://www.midcoast.net/wirelessfaq.html) that
> > is just full of information generated by a local ISP who is
> > quietly beating
> > us to the 2.4 Ghz band with non-licensed power levels and
> > antennas. Just
>
> This is starting to happen here, and hobbyist groups are experimenting
> with
> 2.4 GHz wireless networking. As an example, take a look at

> http://www.air.net.au. These guys should be on the ham bands playing with
> real WANs. :-)
>
> > think of what we could do if we were able to pool together
> > our resources and
> > co-locate a broadband connection with an existing repeater
> > tower. We could
> > have high speed, persistent Internet connections for any hams
> > within line of
> > sight of the repeater. This would be especially nice for
> > those of us who
> > live far enough from town that DSL or even cable modems are
> > never going to be
> > an option. Maybe this violates the 'spirit of ham
> > radio'...but it seems
> > silly to share spectrum with commercial services and deny
> > ourselves the same
> > privileges that non-licensed users enjoy. The main benefit
> > for us is that we
> > could have better power and antenna systems (and hence
> > greater distance). We
> > could have portable broadband Internet connections years
> > before anyone else.
>
> I see Internet connections as a potential minefield that could have all
> sorts of ramifications. I'd say give the Internet a miss at this stage,
> and
> re-evaluate that down the track. It could work, however, with a loosening
> of the regulations, and a charter similar to that of APANA, which is a non
> profit networking group for hobbyists (sort of like a networking club,
> which
> currently uses conventional wired technology). Http://www.apana.org.au
> for
> more information on that one. :)
>
> >
> > The problem in moving forward may stem from the 'no
> > commercial' activity of
> > ham radio. Accessing a manufacturer's web site presumably
> > would violate that
> > rule. Reading email has similar problems if the sender is not a ham.
> > However, unlicensed operators are utilizing the same
> > frequencies with no
> > restrictions. Why are we holding ourselves back? It would
> > be fairly easy to
> > police against abuses, by periodically monitoring activity logs and
> > preventing resource hogging amongst the ranks of our members.
>
> A suitable set of rules would help here.
>
> > I realize that this message was a bit 'off topic' for the
> > satellite group, so
> > if anyone has a problem with that, we can just move it in the
> > spread spectrum
> > group. If you don't have access to the TAPR ss group, you
> > can join without
> > worrying about getting a ton of email. The ss group
> > generates only a few
> > email messages a month.
>
> I might have to join, and get a few others down here to join. Count me
> in!
> :-)
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] Re: Broadband for hams?

From: Also-Antal Csaba <antalcs@mail.matav.hu>
Date: Tue, 13 Jun 2000 16:28:53 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90774-2000.06.13-13.10.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> >It can work steadily for hours.
>
> Except that it has errors. Have you run it at normal speed and still cant
> get it to lock up in a few symbols?

Not any difference.

udv
Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] Re: [amsat-bb] Broadband for hams?

From: Chris Elmquist <chrise@n0jcf.com>
Date: Tue, 13 Jun 2000 17:32:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: amsat-bb@AMSAT.Org, ss@lists.tapr.org
Message-ID: <LYR6751-90810-2000.06.13-17.49.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sunday (06/11/2000 at 01:39PM -0400), Lee810@aol.com wrote:
> The most recent 'lively' discussion on the amsat-bb was related to further
> promoting digital communications which generated more than 60 responses.
> (entitled "Going Digital....Ham Radio?)
>
[snip]
>
> I ran across a web site today (http://www.midcoast.net/wirelessfaq.html) that
> is just full of information generated by a local ISP who is quietly beating
> us to the 2.4 Ghz band with non-licensed power levels and antennas. Just
> think of what we could do if we were able to pool together our resources and
> co-locate a broadband connection with an existing repeater tower. We could
> have high speed, persistent Internet connections for any hams within line of
> sight of the repeater. This would be especially nice for those of us who
> live far enough from town that DSL or even cable modems are never going to be
> an option. Maybe this violates the 'spirit of ham radio'...but it seems
> silly to share spectrum with commercial services and deny ourselves the same
> privileges that non-licensed users enjoy. The main benefit for us is that we
> could have better power and antenna systems (and hence greater distance). We
> could have portable broadband Internet connections years before anyone else.

I would offer that we have alot of catching up to do in this area. There
are many companies now directly addressing this market need. Specifically
they are building part 15 equipment to solve the "last mile" problem for
broadband connections to the end user. The most interesting approach
I have seen (and have even invested in!) are companies who build this
equipment and sell it to cellular phone providers. The cellphone
providers can deploy the stuff (license free) on their existing towers
(which are everywhere right?) and then offer highspeed Internet access
over these links. Suddenly, cellphone providers are now also Internet
providers and people are getting highspeed access without involving the
phone company or the cable company. Big win I think...

Here's a couple urls just for reference:

http://www.waverider.com/

http://www.ampwave.com/

--
Chris Elmquist
chrise@n0jcf.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] RE: FW: [amsat-bb] Broadband for hams?

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Wed, 14 Jun 2000 09:45:57 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90873-2000.06.14-04.58.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Tony is going down the path that a group of us in the Tampa
> Bay FL area are interested in. Though my interest is in mainly

> data, there is a group here who is interested in doing SS voice,
> the greatest interest is in doing some sort of SS voice/data
> repeater. My interest is in doing such a device we now have
> a common access point for any information which we can
> digitize and send over this device, or use the same as a
> network access point.

I have interest more in voice myself, mainly because voice is the more "immediate", emotional form of comms. Data is great, but it's more "mechanical" in feel... And digital voice combines the best of data and voice, with the flexibility and robustness of SS data and the human touch of voice. :-)

> The point being that the voice guys have $$ along with the
> DX guys, These people will toss $$ at something if it will give
> them a solution to their problem. The interest is there, now
> how to get something going that will bring in more interest,
> and allow us to build larger facilities. I believe that using
> SS instead of conventional narrow band facilities, allows
> for much better spectrum usage, and also makes it much
> easier to contemplate a series of "back yard" repeater type
> devices covering a smaller area, but providing much greater
> bandwidth than what is presently offered.

Pooling $$ makes a lot of sense. I've always said that though voice and video are the modes I'd be more interested in playing with, I'd welcome (to the point of saying "jump on and have a play") anyone who wanted to do some serious data work on such a network. I believe an integrated digital network has a lot to offer most hams, and once a small scale version, able to demonstrate the benefits to the general ham community is operational, I believe it will gain wide support from a large proportion of hams (whiners notwithstanding).

> If off of the same repeater/network access point you can
> provide voice and data in the same bit stream, the voice
> being both access to distant voice systems and a local
> repeater, with the ability to selectively call and group people
> you now have the ultimate voice machine. And at the same
> time a device which provides good bandwidth for data and
> a network connection, now it gets even better.

That's what I envisage. And high efficiencies and flexibility can be obtained by using technologies such as multicast IP, which can't be used over the entire Internet at this stage (due to some routers not supporting IGMP). Multicast can be used for voice groups (ad hoc repeater links anyone? :)), or datacasting (could be useful for DX clusters, news bulletins, general network information and the like). Hmm, we might be able to outpush the big "pushers" on the Internet, with less bandwidth. ;-)

Another area of experimentation is with topology, and finding ways to lower the maintenance costs. For example, if linear transponders or OCARs can be utilised on mountaintops to link bases located in ham shacks or club rooms, it could be cheaper to run (at possible some performance cost) than having all the routing "smarts" up on the mountain. A couple of RF amplifiers are much more reliable than a complex microprocessor based router (look at AO-10, the IHU has been trashed by radiation, the batteries are dead, but the transponder lives on, after 17 years in the harsh environment of space!).

>
> Folks we have the bandwidth but if we do not use it, we
> stand to see it sold off.

Agreed. This is one of my motivations. And the bandwidth where we have most room (i.e. above 1 GHz) is ideally suited to these sort of links.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] RE: FW: [amsat-bb] Broadband for hams?

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Wed, 14 Jun 2000 08:27:43 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90885-2000.06.14-07.35.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Looking for a example, I would say in this country (USA) the CDMA network is probably a good example of a starting point.

Each channel is 1.25mhz wide, there is normally one/tower
unless the demand on a given tower exceeds the amount of
time available on that channel. If I remember right each channel
can support 40 simultaneous users, I do not think we have
40 people on the air at the same time in the Tampa Bay area
on any given day at any given time between 2m 220 and 440mhz.
(Sounds like a single "high site" could more than handle the
average traffic demand for this area)

> -----Original Message-----
> From: Tony Langdon [SMTP:tlangdon@atctraining.com.au]
> Sent: Tuesday, June 13, 2000 19:46
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: FW: [amsat-bb] Broadband for hams?
>
> I have interest more in voice myself, mainly because voice is the more
> "immediate", emotional form of comms. Data is great, but it's more
> "mechanical" in feel... And digital voice combines the best of data and
> voice, with the flexibility and robustness of SS data and the human touch
> of
> voice. :-)
>
        [Hast, Chuck] I enjoy doing the data end of things, but gain the
most
        fun from seeing other people use the system, I do not care what the
data
        stream carries, just use it. DX spotting, Voice, computer data,
whatever
        just use it, and let me work with the bits and pieces of it and make
it work.

        Voice by nature will probably always have a larger following than a
data box,
        though the palm devices could change that though I tend to view
those devices
        on a integrated system as being "icing on the cake" just the window
through
        which someone sends a picture or other non-voice data perhaps as
they
        describe it on the voice side of things.

> Pooling $$ makes a lot of sense. I've always said that though voice and
> video are the modes I'd be more interested in playing with, I'd welcome
> (to
> the point of saying "jump on and have a play") anyone who wanted to do
> some
> serious data work on such a network. I believe an integrated digital
> network has a lot to offer most hams, and once a small scale version, able
> to demonstrate the benefits to the general ham community is operational, I
> believe it will gain wide support from a large proportion of hams (whiners
> notwithstanding).
>
        [Hast, Chuck] Yes!! I believe that is the secrete to building a
true digital
        network, make it handle not just computer data but anything that can
        be turned into a data stream. I think the small scale version is
perhaps
        what some of us are calling "back yard repeaters" might be going to.
        The idea being that you install many small "cells" like the
commercial
        people have done, and thereby get better coverage and less
possibility
        that you have a massive failure because some high site went way.
>
> That's what I envisage. And high efficiencies and flexibility can be
> obtained by using technologies such as multicast IP, which can't be used
> over the entire Internet at this stage (due to some routers not supporting
> IGMP). Multicast can be used for voice groups (ad hoc repeater links
> anyone? :)), or datacasting (could be useful for DX clusters, news
> bulletins, general network information and the like). Hmm, we might be
> able
> to outpush the big "pushers" on the Internet, with less bandwidth. ;-)
>
> Another area of experimentation is with topology, and finding ways to
> lower
> the maintenance costs. For example, if linear transponders or OCARs can
> be
> utilised on mountaintops to link bases located in ham shacks or club
> rooms,

> it could be cheaper to run (at possible some performance cost) than having
> all the routing "smarts" up on the mountain. A couple of RF amplifiers
> are
> much more reliable than a complex microprocessor based router (look at
> AO-10, the IHU has been trashed by radiation, the batteries are dead, but
> the transponder lives on, after 17 years in the harsh environment of
> space!).
>
        [Hast, Chuck] Yes, when I lived in Costa Rica, that was one of the
tricks
        we did to keep out switches out of lightning's way, we would keep
the switches
        down in the valley where we could service them and put a digital
regenerative
        repeater up on a mountain, it was simple and would not need to have
tables
        or other software parameters uploaded to the device, it was just a
dumb bent
        pipe repeater with packet regeneration built into it.

> Agreed. This is one of my motivations. And the bandwidth where we have
> most room (i.e. above 1 GHz) is ideally suited to these sort of links.
>
        [Hast, Chuck] Yes, I see 70cm as being a user access point band
along with
        the 33 cm (in the USA) ,25 cm and 12.5 cm bands. The higher ones are
our links
        or very wide band access points for point to point and point to
multipoint type
        drops. Sad thing is that this is already all out there we just have
to get our hands
        on it and start implementing.

        I carry a radio around that pretty much fits the description of a
good part of what
        we are talking about. It is CDMA (DSSS) it handles both voice and
data, though
        it does not do group calls but now that Nextel is out there selling
that service
        on TDMA, the competition is busy trying to get phones on the other
systems
        that will respond to that piece.

        Meantime here we hams are running 30-50 year old voice repeater
technology
        and 99% of those who are running data are doing so at 1k2 or at best
9k6
        data rates B-b, even worse here in Florida the repeater council just
confiscated
        a part of the 70cm band that was designated for packet and digital
links for
        more of that same old voice technology. Yes we are retrograde and
setting our
        selves up for a big fall unless we get our heads out of the sand.
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: ss digest: June 13, 2000

From: "Mark Barner" <barnermark@hotmail.com>
Date: Wed, 14 Jun 2000 09:04:04 PDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90921-2000.06.14-11.07.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This discussion is all well and good. Let's see some schematics for
implementation! PDF files, preferably ...

Also, I have some 33cm-band antennae and digital transceivers. Is there any
interest in L.A./Orange county of California for this line of research if it
were centered around 915 MHz? Thanx.

KE6BOL sends.

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
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30. [ss] RE: FW: [amsat-bb] Broadband for hams?

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 15 Jun 2000 09:41:37 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-90974-2000.06.14-18.45.10--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Looking for a example, I would say in this country (USA) the
> CDMA network is probably a good example of a starting point.
> Each channel is 1.25mhz wide, there is normally one/tower
> unless the demand on a given tower exceeds the amount of
> time available on that channel. If I remember right each channel
> can support 40 simultaneous users, I do not think we have
> 40 people on the air at the same time in the Tampa Bay area
> on any given day at any given time between 2m 220 and 440mhz.
> (Sounds like a single "high site" could more than handle the
> average traffic demand for this area)

I think the situation would be similar for most Australian cities.
Melbourne is the city which would be most likely to experience any
congestion, because of our tendancy to use VHF/UHF more per population
(Syfdney may be larget, but VHF is quiet and UHF is dead, whereas they're
both pretty busy down here :)). Still, 40 channels would be quite
adequate, I think. probably 15-20 simultaneous QSOs max at any given time,
counting simplex, packet and other stuff.

> > voice, with the flexibility and robustness of SS data and
> the human touch
> > of
> > voice. :-)
> >
>   [Hast, Chuck] I enjoy doing the data end of things,
> but gain the
> most
>   fun from seeing other people use the system, I do not
> care what the
> data
>   stream carries, just use it. DX spotting, Voice, computer data,
> whatever
>   just use it, and let me work with the bits and pieces
> of it and make
> it work.

That's a bit of a thrill for me too. One reason I got into (phone) BBSs
years ago and tinker with servers of various kinds and run the odd mailing
list. :-) I'm also looking at setting up a temporary 70cm repeater, to be
used as a "proof of concept" test bed for interlinking with digital
networks. Saves having to negotiate with an existing repeater owner, and
prefectly legal, as long as it's attended and the appropriate procedure is
followed.

>
>   Voice by nature will probably always have a larger
> following than a
> data box,
>   though the palm devices could change that though I tend to view
> those devices
>   on a integrated system as being "icing on the cake"
> just the window
> through
>   which someone sends a picture or other non-voice data perhaps as
> they
>   describe it on the voice side of things.

I think palmtop devices can have a lot of uses, especially as an ancilliary
communications channel alongside voice. And this is one area an integrated
network could have a lot of potential benefits.

>   [Hast, Chuck] Yes!! I believe that is the secrete to building a
> true digital
>   network, make it handle not just computer data but

> anything that can
>   be turned into a data stream. I think the small scale version is
> perhaps
>   what some of us are calling "back yard repeaters" might
> be going to.
>   The idea being that you install many small "cells" like the
> commercial
>   people have done, and thereby get better coverage and less
> possibility
>   that you have a massive failure because some high site went way.

Yes. The problem with "cells" is traditionally, in a circuit switched environment, they are complex to manage. perhaps something clever can be done with multicast on the network side and CDMA on the SS side to easily switch cells and maintain the same data stream, perhaps with a slight interruption (this is the ham version, and we don't have $$$$$ to ensure a 20 mS handoff, but I'm sure a good, cost effective system is possible).

>   [Hast, Chuck] Yes, when I lived in Costa Rica, that
> was one of the
> tricks
>   we did to keep out switches out of lightning's way, we
> would keep
> the switches
>   down in the valley where we could service them and put a digital
> regenerative
>   repeater up on a mountain, it was simple and would not
> need to have
> tables
>   or other software parameters uploaded to the device, it
> was just a
> dumb bent
>   pipe repeater with packet regeneration built into it.

I see this is a way to go. We have to keep the equipment on the hilltops simple. Site access is becoming a scarce commodity, and the simpler the gear on the mountain, the less often we'll have to service it onsite.

>   [Hast, Chuck] Yes, I see 70cm as being a user access point band
> along with
>   the 33 cm (in the USA) ,25 cm and 12.5 cm bands. The
> higher ones are
> our links
>   or very wide band access points for point to point and point to
> multipoint type
>   drops. Sad thing is that this is already all out there
> we just have
> to get our hands
>   on it and start implementing.

Yes. The fun doesn't really start until 70cm, where many users will first access the system. With the relatively short range in metro areas, bands up to 13cm will be good candidates. I'd also like to see existing repeaters, especially in rural areas connected to the system, as well as the odd HF gateway. And make sure the packet network is well catered for. Perhaps we'll all have ampr.org email addresses on 44.x IP addresses, but we'll need to ensure existing packet systems can intercommunicate with the new network.

One of my beliefs is that the system will have to be as backwards compatible as possible. As this will be a radical change in amateur technology, backwards compatible will mean building gateways to allow existing voice and data users to access the new network in useful ways. Examples include:

1. Repeater linking, especially over long distances.
2. Simplex gateways. Could be especially useful for news transmissions.
3. Packet email gateways.
4. Packet "portals" into popular applications (e.g. DX clusters, chat rooms, etc).
5. Limited by our imagination! :-)

>   I carry a radio around that pretty much fits the
> description of a
> good part of what
>   we are talking about. It is CDMA (DSSS) it handles both
> voice and
> data, though
>   it does not do group calls but now that Nextel is out
> there selling

> that service
>   on TDMA, the competition is busy trying to get phones
> on the other
> systems
>   that will respond to that piece.

We're all on GSM here. CDMA is out there, but not popular in the cities
yet.

>   Meantime here we hams are running 30-50 year old voice repeater
> technology

Which in itself isn't necessarily bad, as I feel there is a place for FM
repeaters in the new network. They have the advantage of simplicity, just
the thing for emergency local area comms. The network will enhance the
capabilities of FM repeaters.

>   and 99% of those who are running data are doing so at
> 1k2 or at best
> 9k6

Which doesn't do a lot for me, except for APRS, which is an application that
works well at these low data rates.

>   data rates B-b, even worse here in Florida the repeater
> council just
> confiscated
>   a part of the 70cm band that was designated for packet
> and digital
> links for
>   more of that same old voice technology. Yes we are
> retrograde and
> setting our
>   selves up for a big fall unless we get our heads out of
> the sand.

I agree. It'a time to move forward.

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31. [ss] [Fwd: I-D ACTION:draft-loughney-sigtran-ip-ran-00.txt]

From: esjatharvee <esj@harvee.billerica.ma.us>
Date: Mon, 19 Jun 2000 10:24:37 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-91768-2000.06.19-09.28.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

[Empty message body]

32. [ss] http://tapr.org/tapr/html/ss.qexss.html

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Thu, 22 Jun 2000 13:30:08 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92426-2000.06.22-13.33.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Don't beleive everything you read on TAPR's webpage. Most of it is
outdated.

Here is an outdated excerpt from
http://tapr.org/tapr/html/ss.qexss.html#wp15
> Amateurs should realize that under the present Part 97 rules and regulations governing amateur
> spread spectrum today, taking a Part 15 spread spectrum device and adding an amplifier to it
> would break the rules. Even though it would be transmitting within the amateur spectrum, it more
> than likely would not be using one of the specified spreading codes assigned to amateur operation
> (refer to Sec. 97.311 Section (d) - SS emission types). However, this should not deter the radio
> amateur from using Part 15 devices in their experimentation or use in the amateur service. The
> device should be monitored to ensure that it remains under the Part 15 regulations and as such, no
> Part 97 regulations apply. Amateur traffic can flow though Part 15 devices, and they do not require
> a callsign since they do not require a license. However, the radio amateur should realize that when
> the traffic enters the amateur bands, for example, through a gateway, then Part 97 rules begin to
> apply.

Almost a full year ago the SS rules where relaxed.. So I highly
recommend adding an amplifier to
a Part 15 spread spectrum device. I'm begining to think TAPR dosen't
want to advance the digital

radio art. They seem happy with ARPS. Also the so-called 900 MHz FHHS
radio kit/project, (it's been
4 years now guys) dosen't seem to be going anywhere. Besides the
average ham population won't want to
mess with a kit, they either won't have the time or knowledge to do it.
So why not buy a part 15 SS
ethernet card, add a high gain antenna/amplifer and do 2 MBs and up
TODAY.... and STOP talking about
it! It's affordable, & easy to implement.. It makes sense to me

Here is a brief overview/comaprison of the current rules from:
http://www.qsl.net/kb9wmr/projects/wireless/plan.html

Parts 15.205, 15.209 & 15.247 FCC Rules for ISM bands:
****
- Connectors must be hard to find
- +36 dBm (3.981 Watts) EIRP RF output power (1 watt w/ 6dBi antenna
gain)
- Maximum +30 dBm (1 W) RF power output at product's connector
- Spurious emissions in the 2390 and 2483.5 MHz bands must be lower than
  -41 dBm
- ISM Bands are: 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz

Part 97.311 Spread Spectum FCC Rules for Ham bands:
****
97.311 SS emission types

(a) SS emission transmissions by an amateur station are authorized only
    for communications between points within areas where the amateur
    service is regulated by the FCC and between an area where the
amateur
    service is regulated by the FCC and an amateur station in another
    country that permits such communications. SS emission transmissions
    must not be used for the purpose of obscuring the meaning of any
    communication.
(b) A station transmitting SS emissions must not cause harmful
    interference to stations employing other authorized emissions, and
    must accept all interference caused by stations employing other
    authorized modes.
(c) When deemed necessary by a District Director to assure compliance
with
    this Part, a station licensee must:
  (1) Cease SS emission transmissions;
  (2) Restrict SS emission transmissions to the extent instructed; and
  (3) Maintain a record, convertible to the original information (voice,
      test, image, etc.) of all spread spectrum communications
transmitted.
(d) The transmitter power must not exceed 100 W under any circumstances.
    If more than 1 W is used, automatic transmitter control shall limit
    output power to that which is required for the communication. This
    shall be determined by the use of the ratio, measured at the
receiver,
    of the received energy per user data bit (Eb) to the sum of the
    received power spectral densities of noise (N0) and co-channel
    interference (I0). Average transmitter power over 1 W shall be
    automatically adjusted to maintain an Eb/(N0+I0) ratio of no more
    than 23 dB at the intended receiver.

Amateur Band Allocations:
****

902 - 928 MHz   Secondary to industrial, scientific and medical
                    devices; automatic vehicle monitoring systems, and
                    government stations.

2300 - 2305 MHz   Secondary - No primary amateur service
2305 - 2310 MHz   Secondary to fixed, mobile and radiolocation
services
2390 - 2400 MHz   Primary
2400 - 2402 MHz   Secondary - No primary amateur service
2402 - 2417 MHz   Primary
2417 - 2450 MHz   Co-secondary with government radiolocation
(industrial,
                    scientific and medical are primary)
2450 - 2483.5 MHz   Industrial, scientific and medical

5650 - 5725 MHz   Co-secondary with space research (deep space)
service

5725 - 5850 MHz   Secondary - No primary amateur service
5850 - 5925 MHz   Secondary to non-government fixed-satellite service

---
Summary:
[note: some drivers for various cards let you control how/where they
hop]
[Direct sequence systems can be set for frequencies centered below
2.45.]
[Proxim will change the country code to that of Australia if you provide
a]
[copy of your ham license. That puts it in frequencies below 2.45.]
-You need to ID in a known and accepted form every 10 min.
(I suggest using an AXIP driver set to send and AX.25 ID frame every 10
min)
-100 watts (PEP) max for spread modes
-More than 1 watt (PEP) requires automatic transmitter power control

What it boils donw to in my book is this: Ham radio is far behind the
modern radio
world, its time for a big kick in the butt.. Or you can keep your 1200
baud AX.25,
and watch the hobby die. Your choice.

Steve Lampereur, KB9MWR

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Jack Kerouac <horseshoe7@yahoo.com>
Date: Thu, 22 Jun 2000 16:35:41 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92478-2000.06.22-18.39.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

--- Steve Lampereur <kb9mwr@yahoo.com> wrote:
> Don't beleive everything you read on TAPR's webpage.
> Most of it is outdated.
>
> Almost a full year ago the SS rules where relaxed..
> So I highly
> recommend adding an amplifier to
> a Part 15 spread spectrum device. I'm begining to
> think TAPR dosen't
> want to advance the digital
> radio art. They seem happy with ARPS. Also the
> so-called 900 MHz FHHS
> radio kit/project, (it's been
> 4 years now guys) dosen't seem to be going anywhere.
> Besides the
> average ham population won't want to
> mess with a kit, they either won't have the time or
> knowledge to do it.
> So why not buy a part 15 SS
> ethernet card, add a high gain antenna/amplifer and
> do 2 MBs and up
> TODAY.... and STOP talking about
> it! It's affordable, & easy to implement.. It
> makes sense to me

You are right! Until I came across the GBPPR web
page, I was hesitant to question TAPR's "authority".
But I can now see the light.

I have produced a web page; "History and Future of
Amateur High-Speed Wireless Networking" that describes
the present situation, and how we got here.

http://www.geocities.com/SiliconValley/Monitor/2254/radio.html

TAPR's place in history is beginning to become
tarnished.

> What it boils donw to in my book is this: Ham radio
> is far behind the
> modern radio
> world, its time for a big kick in the butt.. Or you

> can keep your 1200
> baud AX.25,
> and watch the hobby die. Your choice.
>
> Steve Lampereur, KB9MWR

Good show, Steve.

Stewart Teaze, N0MHS

Wireless High-Speed Networking Information:
http://www.geocities.com/SiliconValley/Monitor/2254/radio.html

_____
Do You Yahoo!?
Get Yahoo! Mail - Free email you can access from anywhere!
http://mail.yahoo.com/

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34. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: N8xlr@aol.com
Date: Fri, 23 Jun 2000 21:03:32 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92672-2000.06.23-20.07.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve , I agree completely. I have been waiting patienty for TAPR to set a
standard protocol and I am tired of being restricted to low baud rates by the
FCC. Go for it Steve and thanks for speaking out. Lew N8XLR

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35. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Steve Dimse <k4hg@tapr.org>
Date: Sat, 24 Jun 2000 09:56:19 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92738-2000.06.24-09.00.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Steve , I agree completely. I have been waiting patienty for TAPR to set a
>standard protocol and I am tired of being restricted to low baud rates by
>the
>FCC. Go for it Steve and thanks for speaking out.
>
There seems to be some misunderstanding about what TAPR is.

The standard phrase is a "membership supported research and development
organization". What we do is assist amateurs that wish to do some sort of
developmental effort pertaining to digital communications. If one of YOU
wishes to set a "standard protocol", whatever that means, we stand ready
to help. However, the dues from a couple thousand members does not pay
for a cadre of engineers and technical writers which we can assign to
tasks. We are dependent on volunteer efforts for all of our projects. I'm
sure any of you would be most upset were you to get a call from TAPR
stating you have been assigned to work on project xyz. You simply cannot
do this to volunteers, they must pick their tasks for themselves.

In the 5 years or so I have been associated with TAPR, a single spread
spectrum project has been brought to us. This has been very heavily
supported, but even then, we are at the mercy of those voluteers working
on the project.

I wish TAPR commanded a multi-million dollar R&D budget, I think amateur
radio would have a very different look. If any of you have a few mill you
don't need, give us a call, we could put it to good use. Until then, TAPR
is doing the best we can with what we have.

If any of you have something you want to work on, ss or otherwise, and
are willing to do the work but need some sort of assistance, then please
consider contacting us.

Steve K4HG

TAPR Board Member

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sat, 24 Jun 2000 12:26:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92751-2000.06.24-12.30.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Steve , I agree completely. I have been waiting patienty for TAPR to set a
>standard protocol and I am tired of being restricted to low baud rates by
>the FCC. Go for it Steve and thanks for speaking out. Lew N8XLR

Well.. regardless of what TAPR does:

Here is a breakdown of the speed/ bandwith constraints for data.

[97.307(f)]
50.1 - 148 MHz 19.6 kilobauds - 20 kHz bandwidth
222 - 450 MHz   56 kilobauds   - 100 kHz bandwidth
Above 900 MHz - No speed limit also no bandwith limit

The above 900 MHz part, is again a wake up call for us. Every year they try to
take away/modify out allocations for the UHF/SHF spectrum since we hardly
use them. Also the Part 15 (ISM) wireless cards start at 900 MHz and go
up.. (also 2.4 & 5.7 GHz)

Obviously following what the commercial world does by using the TCP/IP
protocol is smart thinking.

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37. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Jeff King <jeff@aerodata.net>
Date: Sat, 24 Jun 2000 16:20:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92762-2000.06.24-15.22.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

These are more general comments, and should be taken as such. Also
copying them to taprorg.

Steve Dimse wrote:

> >Steve , I agree completely. I have been waiting patienty for TAPR to set a
> >standard protocol and I am tired of being restricted to low baud rates by
> >the
> >FCC. Go for it Steve and thanks for speaking out.
> >
> There seems to be some misunderstanding about what TAPR is.

I think you lost the "message" in all the postings so far. This "mis-understanding"
seems to be ongoing.

> The standard phrase is a "membership supported research and development
> organization".

Meaningless as most "standard phrases" go.

> What we do is assist amateurs that wish to do some sort of
> developmental effort pertaining to digital communications.

OK, that is better. But, it might be helpful, if you could explain in detail what
this is. I don't ever recall this being explained in detail in the PSR. I know the
times I have asked about it privately, the explanation wasn't much better then
this. Very vague.

> In the 5 years or so I have been associated with TAPR, a single spread
> spectrum project has been brought to us. This has been very heavily
> supported, but even then, we are at the mercy of those voluteers working
> on the project.

Hmmm.... that's not true. What about Randy Roberts offer in Feb of 1997?

See: http://www.tapr.org/tapr/list-archive/ss/9702/msg00004.html

Now.... at the risk of being compared to space aliens and Elvis again., what
many don't know is the TAPR SS radio was a "black" project at or very
near that time. Meaning the project was funded, but not yet announced to the
membership (I had been told this firsthand by one of the BOD members at the
time). More then a few of the membership got upset when this was discovered.

> If any of you have something you want to work on, ss or otherwise, and
> are willing to do the work but need some sort of assistance, then please
> consider contacting us.

I know three times I offered to get a group buy together
with little/no help from TAPR for commercial SS radios.

The first in July of 96 was for the FreeWave radio, which I later found out
TAPR was talking with, and then I was told to stand down. See:

http://www.tapr.org/tapr/list-archive/ss/9607/msg00011.html

The second in Jan of 1997 after TAPR tanked the FreeWave deal:

http://www.tapr.org/tapr/list-archive/ss/9701/msg00172.html

And the third time just this year:

http://www.tapr.org/tapr/list-archive/ss/0001/msg00033.html

Now, the second time I never heard back from anyone from TAPR.... so I just
went ahead and did it myself. What ended up happening is I got some people
upset within TAPR as unknown to me they where doing the same thing. I was
told to stop.

So, the third time I wanted to make sure this didn't happen again, so I asked
for some specific constraints. In private mail, a BOD member keep telling me
he would get back to me, but never did. I eventually gave up. I'm not sure how
relevant this is anymore, since these WLAN cards are commodity items anyways.
None the less, still it would have been good to get some input.

I can go on with other examples, but my point is that its just not as simple as
volunteering or asking for help....

BTW, these people that made these disparaging remarks about TAPR, they are not
TAPR members, at least the two of the three I wrote off SIG. Yet they *were* TAPR
members. I just don't think they should be dismissed this quickly.... yes there is nothing
that can be done about the past, but what about the future? Exam the successes and
failures of past years, make real efforts to get new blood within the organization (term
limits?), and reach out to other organizations(what about my Nord-Link question Steve?).

I'd like to see TAPR return to its distant roots....a organization that is more a peer based
R&D organization. Then, and only then, will the statement "membership supported research
and development organization" not have a hollow meaning. We all need to work together
and the TAPR membership *can* contribute alot to this.

Give it some thought. You and the board are now in a unique position to change the course.
Take advantage of it.

73

Jeff

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

38. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Steve Dimse <k4hg@tapr.org>
Date: Sat, 24 Jun 2000 17:40:48 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92767-2000.06.24-16.44.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On 6/24/00 4:20 PM Jeff King (jeff@aerodata.net) wrote:
>
>> What we do is assist amateurs that wish to do some sort of

>> developmental effort pertaining to digital communications.
>
>OK, that is better. But, it might be helpful, if you could explain in
>detail what
>this is. I don't ever recall this being explained in detail in the PSR. I
>know the
>times I have asked about it privately, the explanation wasn't much better
>then
>this. Very vague.

It has to be vague, because there are no rigid rules. If someone comes to
us with a proposal, it is evaluated based on available manpower and
resources. Generally, the available manpower is zero, aside from a few
specific tasks like board layout and kit documentation. So the first
thing is a project must be fully staffed. This eliminates most ideas,
which are generally phrased like "Why don't you...". An idea is not the
same as a project. Much as I wish it were otherwise, TAPR can't do much
with ideas, only with projects.
>
>> In the 5 years or so I have been associated with TAPR, a single spread
>> spectrum project has been brought to us. This has been very heavily
>> supported, but even then, we are at the mercy of those voluteers working
>> on the project.
>
>Hmmm.... that's not true. What about Randy Roberts offer in Feb of 1997?
>
>See: http://www.tapr.org/tapr/list-archive/ss/9702/msg00004.html
>
There are a couple key clauses in this offer that explain why this never
happened:

```
-----------
    (2) TAPR (or any other Bona Fide Amateur Radio Organization) and
     other assorted / interested volunteers supply labor and materials,
     as needed, to fully develop and test this new design.

     (3) TAPR (or any other Bona Fide Amateur Radio Organization) sets
     up a Project / Team organization to provide direction, guidance and
     start on a "Ham Radio SS" Standard, ASAP!
-----------
```

No one, including you, took the responsibility of meeting these two
clauses. Again, if TAPR had a back room full of employees that could be
assigned tasks, the story might be different. As the offer was presented,
this would be a major effort for which TAPR lacked the necessary personel
resources. So, as far as I am concerned, this is not an offer for a TAPR
supported project...it was an offer to turn over an incomplete design and
have TAPR take over responsibility for completing and debugging the
design. We couldn't do it, and apparently neither could you.

>Now.... at the risk of being compared to space aliens and Elvis again., what
>many don't know is the TAPR SS radio was a "black" project at or very
>near that time. Meaning the project was funded, but not yet announced to the
>membership (I had been told this firsthand by one of the BOD members at the
>time). More then a few of the membership got upset when this was discovered.
>
I do not want to imply something into your words that is not there, but
are you saying that the above offer was not accepted because there was
already an SS project being supported by TAPR? Please clarify....

I can say that were this offer presented now, it would again have to be
turned down, because there are still not the manpower resources to staff
the project. It would have nothing to do with any other project.

>> If any of you have something you want to work on, ss or otherwise, and
>> are willing to do the work but need some sort of assistance, then please
>> consider contacting us.
>
>I know three times I offered to get a group buy together
>with little/no help from TAPR for commercial SS radios.
>
Several attempts at group buys have been made. All fell through for one
reason or another. Generally, the manufacturers are uninterested in
dealing with low volume purchases (and even if every member of TAPR buys
2, the manufacturers consider this low volume), especially when the
equipment is to be used for other than its intended purpose.

>
>I can go on with other examples, but my point is that its just not as

>simple as
>volunteering or asking for help....
>
When such negotations are being attempted, they can be very sensitive.
Too much disclosure can poison the deal. I too am sorry none of these
worked out, but the attempts were made to the best of TAPR's ability. I'm
sorry if you feel that you were left out of the process.

>I'd like to see TAPR return to its distant roots....a organization that is
>more a peer based
>R&D organization. Then, and only then, will the statement "membership
>supported research
>and development organization" not have a hollow meaning. We all need to
>work together
>and the TAPR membership *can* contribute alot to this.
>
>Give it some thought. You and the board are now in a unique position to
>change the course.
>Take advantage of it.
>
I think it _is_ a peer-based R&D organization. The peers are those people
doing R&D...people with ideas that are willing to dedicate their own time
to developing those ideas. To people that are not in that group it may
sound like elitism, but unless we get a multi-million dollar endowment,
there is simply no choice. This is not a new development...the first
president of TAPR, Lyle Johnson, has a saying: "He who codes or builds,
rules". This means that because TAPR is dependent on volunteer developers
for its R&D, they are the ones, who by deciding what to work on, set the
priorities. It is totally open to people that want to get involved in
this constructive manner. I certainly had no problems, and I've seen
plenty of others get involved over the last few years.

It doesn't matter how great a need is, or how many people want to buy a
product, unless there are volunteers that have the skills, time, and
drive to produce it, TAPR can't do it. Wishing won't change that, only a
few million will.

Steve K4HG

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

39. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Derek Lassen <kn6td@clubnet.net>
Date: Sat, 24 Jun 2000 15:28:24 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: netsig@lists.tapr.org
Message-ID: <LYR6751-92768-2000.06.24-17.33.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In addition we have to contend with the narrow mindedness of the spectrum cops.

The coordination commitees fail to see the need for a very wide segment of
spectrum. Their idea of wideband is TV (AM at that - ugh).

I think that a useful solution requires five points:
    1) Very high bandwidth (10M bps or more).
    2) Roam ability.
    3) Easy attachment.
    4) Robustness.
     5) Fairly cheap.

Attacking TAPR gets nowhere - TAPR does what TAPR was intended to do - act
as a forum.

What I think is needed is a coordinated attack on the problem.
We'll need:
      1) An interface that goes fast enough.
      2) Drivers for that interface.
      3) A protocol stack.
      4) A router.
      5) A modem
      6) An RF deck.
      7) Antennas.

And finally, I really think this discussion shhould be in the networking SIG.

Rant off.

73 de KN6TD

(s) Derek

.At 12:26 PM 6/24/00 -0500, you wrote:
> >Steve , I agree completely. I have been waiting patienty for TAPR to set a
> >standard protocol and I am tired of being restricted to low baud rates by
> >the FCC. Go for it Steve and thanks for speaking out. Lew N8XLR
>
>Well.. regardless of what TAPR does:
>
>Here is a breakdown of the speed/ bandwith constraints for data.
>
>[97.307(f)]
>50.1 - 148 MHz 19.6 kilobauds - 20 kHz bandwidth
>222 - 450 MHz   56 kilobauds   - 100 kHz bandwidth
>Above 900 MHz - No speed limit also no bandwith limit
>
>The above 900 MHz part, is again a wake up call for us. Every year they
>try to
>take away/modify out allocations for the UHF/SHF spectrum since we hardly
>use them. Also the Part 15 (ISM) wireless cards start at 900 MHz and go
>up.. (also 2.4 & 5.7 GHz)
>
>Obviously following what the commercial world does by using the TCP/IP
>protocol is smart thinking.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

40. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Jeff King <jeff@aerodata.net>
Date: Sat, 24 Jun 2000 19:37:22 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92773-2000.06.24-18.38.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Again, please consider the broader issues here even though some
"old news" specifics (as examples) where listed.

Steve Dimse wrote:

> On 6/24/00 4:20 PM Jeff King (jeff@aerodata.net) wrote:

> >> In the 5 years or so I have been associated with TAPR, a single spread
> >> spectrum project has been brought to us. This has been very heavily
> >> supported, but even then, we are at the mercy of those voluteers working
> >> on the project.
> >
> >Hmmm.... that's not true. What about Randy Roberts offer in Feb of 1997?
> >
> >See: http://www.tapr.org/tapr/list-archive/ss/9702/msg00004.html
> >
> There are a couple key clauses in this offer that explain why this never
> happened:

HOLD ON now. Your now admitting there was indeed another offer!! That's
what I was saying. The fellow was handing you a design that was quite far
along. His clauses seemed quite reasonable to me and they were publicly
stated (we still don't know what the clauses where on the TAPR SS radio) I
think the real issue is he was a TAPR outsider *and* he just wanted to release his
design for amateur use (i.e. no Part 15 commercial sales). It was also clear to me
their were some amount of friction between him and one of the TAPR SS team members.

Of course that's my opinion based on observation.... And I'm not even saying this
declining of his offer (through neglect) was a bad choice at the time, its just
disingenuous of you to state that no-one has come forward
to TAPR with a spread spectrum project.

> >Now.... at the risk of being compared to space aliens and Elvis again., what
> >many don't know is the TAPR SS radio was a "black" project at or very
> >near that time. Meaning the project was funded, but not yet announced to the

> >membership (I had been told this firsthand by one of the BOD members at the
> >time). More then a few of the membership got upset when this was discovered.
> >
> I do not want to imply something into your words that is not there, but
> are you saying that the above offer was not accepted because there was
> already an SS project being supported by TAPR? Please clarify....

As a member of the BOD, your in a better position that answer that question then me.

All I know for a fact is that TAPR officers and board members organized a design team
for "their" spread spectrum project where as Randy was left to his own resources to
assemble one. This is fairly well documented so no need for me to imply anything
there as the timelines speak for themselves. And here we are today. Can't
change the past, but we can change the future...... only if we are willing.

As a TAPR BOD member, are you willing?

> I>I know three times I offered to get a group buy together
> >with little/no help from TAPR for commercial SS radios.
> >
> Several attempts at group buys have been made. All fell through for one
> reason or another.

I know about FreeWave (and I also know both sides of the story on that one)
.... what other ones fell through?

> Generally, the manufacturers are uninterested in
> dealing with low volume purchases (and even if every member of TAPR buys
> 2, the manufacturers consider this low volume), especially when the
> equipment is to be used for other than its intended purpose.

Since your cutting and pasting Greg's original message, why don't you just cut and
paste my response to this blanket claim? What your really saying
here is TAPR is not interested in doing a group purchase. Which is FINE,
just say that instead of whining how no-one volunteers.

> >
> >I can go on with other examples, but my point is that its just not as
> >simple as
> >volunteering or asking for help....
> >
> When such negotations are being attempted, they can be very sensitive.

Your making a mountain out of a mole-hill. Like I said, go back and read
the message you where cutting and pasting (here is my earlier response to
these defeatist type comments)

http://www.tapr.org/tapr/list-archive/ss/0001/msg00033.html

The point is, if there is a will, there is a way. And the point I believe
these modern day posters was raising is there was no will.

> I too am sorry none of these
> worked out, but the attempts were made to the best of TAPR's ability. I'm
> sorry if you feel that you were left out of the process.

Sorry? Thanks, but I'm OK. Didn't stop me from buying FreeWave radios (10 so far)
or Wavelans or Proxims or... Not the point. At the risk of displaying alot of
bravado, I'm sorry for TAPR for not taking advantage of the skills of their
membership. I'm confident I could have made a deal go through.

Its my _opinion_ that TAPR avoided/suppressed group buys so as not
to dilute the user base for the TAPR, now Dandin, SS radio. From a business
perspective, I can understand how TAPR would have done this as it would have
diluted there then as yet unannounced TAPR SS radios user base. Yet when you
and others start hooting off how you don't get enough volunteers, I need to point
out its not always as simple as volunteering.

Which was my modern day point.

> >I'd like to see TAPR return to its distant roots....a organization that is
> >more a peer based
> >R&D organization. Then, and only then, will the statement "membership
> >supported research
> >and development organization" not have a hollow meaning. We all need to

> >work together
> >and the TAPR membership *can* contribute alot to this.
> >
> >Give it some thought. You and the board are now in a unique position to
> >change the course.
> >Take advantage of it.
> >
> I think it _is_ a peer-based R&D organization. The peers are those people
> doing R&D...people with ideas that are willing to dedicate their own time
> to developing those ideas.

> To people that are not in that group it may
> sound like elitism,

You have had four people in as many days question this, and it appears all four
have done SS projects on their own. Yet, all four seem to have a problem
with the way TAPR has done things in the past.

http://www.qsl.net/n9zia/
http://www.gbonline.com/~multiplx/wireless/
http://www.qsl.net/kb9mwr/projects/wireless/plan.html
http://www.geocities.com/SiliconValley/Monitor/2254/radio.html

Or you just don't care?

> It doesn't matter how great a need is, or how many people want to buy a
> product, unless there are volunteers that have the skills, time, and
> drive to produce it, TAPR can't do it. Wishing won't change that, only a
> few million will.

What I am "wishing" for won't take a few million. Here were some of
my specific suggestions that I will outline clearly so you don't miss
them this time. These are questions specifically for the BOD, which the
BOD can only address

1. What do you think about some sort of term limits for TAPR BOD/Officers?
  This is more complicated then it looks, efforts will have to be made to increase the
number of people running for the board. Yet it is doable and will promote diversity
of views within TAPR

2. What do you think about TAPR reaching out to other organizations (my unanswered
NordLink question might be a good place to start)? There really is alot that TAPR,
and its membership, is missing.

3. Better communications with the membership. (The much tauted TAPR-ORG board
has only had one previous posting on it, my question about the Dayton update) I see
you didn't even bother to use it yourself in responding to this message..... better suited
although I suspect the audience would be far less. How many people even know that
the TAPR president resigned in May (that didn't go to Dayton)?

As a TAPR member it disturbs me when I see comments such as Steve Lampereur,
Jack Kerouac, N8xlr and others make. Yet, there is some basis to truth in these. All
these fellows have given up on TAPR, they let their memberships lapse. I've been
a member for 16 years, and hope the organization can return to its roots. Yet when I see
a BOD member so quickly dismiss these concerns, it really bothers me.

This whole "Dandin issue", or more specifically the mindset that allowed it to happen, I
had hoped had gone away. It seems like it still lives on. I hope this changes and now
seemed like a good time in "TAPR history" for the board to take proactive measures to
change the future.

Flame me all you want, but I hope the BOD considers some of the issues at a later date.

-Jeff

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

41. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sun, 25 Jun 2000 14:24:27 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92870-2000.06.25-14.28.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well first off I want to apologize. Obviously I opened a can of worms.
I would also like to clarify that I don't expect TAPR to do anything,
other than use their power of influence to promote the future of digital
communications properly. They don't need to build anything or spend
any money to make me happy. Nor do I care about the internal affairs
of TAPR in anyway.

A lot of hams look at TAPR and what they are doing and promoting. And
when TAPR's web material is outdated, hams are led astray. It's just
my observation that TAPR doesn't seem to be promoting the idea of using
modified part 15 wireless devices as much as they should be.

Steve Lampereur, KB9MWR
http://www.qsl.net/kb9mwr

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

42. [ss] Innomedia ?

From: "Marcelo Puhl" <mark@plug-in.com.br>
Date: Sun, 25 Jun 2000 18:04:37 -0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92882-2000.06.25-16.05.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

I think this company has some interesting SS high-speed modems that
could be used by hams :

http://www.innomedia.com/wireless/products.html

73, Marcelo - PY3SS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

43. [ss] Re: http://tapr.org/tapr/html/ss.qexss.html

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Mon, 26 Jun 2000 08:44:15 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-92892-2000.06.25-17.48.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> [97.307(f)]
> 50.1 - 148 MHz 19.6 kilobauds - 20 kHz bandwidth
> 222 - 450 MHz   56 kilobauds   - 100 kHz bandwidth
> Above 900 MHz - No speed limit also no bandwith limit

Gee, we're even better off down here, where "wideband and pulse modes are
only permitted above 420 MHz", so we can start seriously looking at SS from
70cm and up.

> The above 900 MHz part, is again a wake up call for us.
> Every year they try to
> take away/modify out allocations for the UHF/SHF spectrum
> since we hardly
> use them. Also the Part 15 (ISM) wireless cards start at 900
> MHz and go
> up.. (also 2.4 & 5.7 GHz)
>
> Obviously following what the commercial world does by using
> the TCP/IP
> protocol is smart thinking.

nd also lookm at the low cost devices already out there. Surely there's a
way to utilise these in our networks.

As the old saying goes... "Use it or lose it", and we'd better start with
the using.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

44. [ss] Re: ss digest: June 13, 2000

From: Everett F Batey <efb@cotdazr.org>
Date: Sun, 25 Jun 2000 19:19:35 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: Mark Barner <barnermark@hotmail.com>
Message-ID: <LYR6751-92917-2000.06.25-21.23.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gee Mark,,

I.m near the water in southern Oxnard is that worth a try .. can you
see chan 63 which is little further inland ?

/Everett/ Ventura County ..

On Wed, Jun 14, 2000 at 09:04:04AM -0700, Mark Barner wrote:
> Also, I have some 33cm-band antennae and digital transceivers. Is there any
> interest in L.A./Orange county of California for this line of research if it
> were centered around 915 MHz? Thanx.
>
> KE6BOL sends.

--
 + http://www.vhwy.com efb@vhwy.com WA6CRE@arrl.net http://www.cotdazr.org +
 + PocketNet Mail 8053406471@mobile.att.net / Cell/VoiceMail 805 340-6471 +
 + Unix BSD, Sun, HP SCO Linux Security Cisco Routing DataFellows QMail DNS +

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

45. [ss] Part 15 device conversions

From: Daven6ojj@aol.com
Date: Mon, 26 Jun 2000 12:00:20 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93059-2000.06.26-11.04.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

For those who have not checked the FCC website lately...

In a posting from the Office of Engineering and Technology (OET), no. DA
00-1087, dated May 22, 2000;

Since MMCX, MCX, and reverse polarity SMA, BNC and TNC have become readily
available...

(excerpted)
"However, because these connectors have become readily available, they are no
longer considered sufficient to demonstrate compliance with Section 15.203.
Therefore, 30 days from the date of this Public Notice, we will no longer
accept MMCX, MCX, and reverse polarity SMA, BNC, and TNC type antenna
connector for meeting the requirements in Section 15.203 for all Part 15
transmitters. This action is being taken to inform applicants and
manufacturers of this change in policy with respect to the aforementioned
connectors."

In light of the mass market, large scale manufacturing world we now live in,
it is the OPINION of this amateur operator that the FCC will be repeatedly
pushed into making similar Public Notices for products that do not have fixed
antennas. The presence of a fixed antenna has not prevented me from
converting a Part 15 device into a Part 97 device but a little more
creativity may be called for with products newly Certified since last week.

By the way, don't forget to make sure your callsign is routinely sent to keep
notes from Mr. Hollingsworth out of your mailbox.

Cheers,
Dave McBrayer, N6OJJ
in the heart of the San Francisco Bay metro area

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

46. [ss] RE: Part 15 device conversions

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 26 Jun 2000 12:01:00 -0400

To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93061-2000.06.26-11.09.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Does this mean that the load of stuff in production now will be
dumped at reduced cost (windfall for us?)

> -----Original Message-----
> From: Daven6ojj@aol.com [SMTP:Daven6ojj@aol.com]
> Sent: Monday, June 26, 2000 12:00
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Part 15 device conversions
>
> For those who have not checked the FCC website lately...
>
> In a posting from the Office of Engineering and Technology (OET), no. DA
> 00-1087, dated May 22, 2000;
>
> Since MMCX, MCX, and reverse polarity SMA, BNC and TNC have become readily
>
> available...
>
> (excerpted)
> "However, because these connectors have become readily available, they are
> no
> longer considered sufficient to demonstrate compliance with Section
> 15.203.
> Therefore, 30 days from the date of this Public Notice, we will no longer
> accept MMCX, MCX, and reverse polarity SMA, BNC, and TNC type antenna
> connector for meeting the requirements in Section 15.203 for all Part 15
> transmitters. This action is being taken to inform applicants and
> manufacturers of this change in policy with respect to the aforementioned
> connectors."
>
> In light of the mass market, large scale manufacturing world we now live
> in,
> it is the OPINION of this amateur operator that the FCC will be repeatedly
>
> pushed into making similar Public Notices for products that do not have
> fixed
> antennas. The presence of a fixed antenna has not prevented me from
> converting a Part 15 device into a Part 97 device but a little more
> creativity may be called for with products newly Certified since last
> week.
>
> By the way, don't forget to make sure your callsign is routinely sent to
> keep
> notes from Mr. Hollingsworth out of your mailbox.
>
> Cheers,
> Dave McBrayer, N6OJJ
> in the heart of the San Francisco Bay metro area
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

47. [ss] Re: Part 15 device conversions

From: John Hansen <john@hansen.net>
Date: Mon, 26 Jun 2000 12:13:21 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93063-2000.06.26-11.15.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What I don't understand is why the BreezeCom units that I've bought have
standard SMA connectors on them. Even the unit I had repaired last year
(with a brand new transmitter board and connectors) came with standard SMA.

Hmmmm.

John W2FS

At 12:00 PM 6/26/00 -0400, you wrote:
>For those who have not checked the FCC website lately...

>
>In a posting from the Office of Engineering and Technology (OET), no. DA
>00-1087, dated May 22, 2000;
>
>Since MMCX, MCX, and reverse polarity SMA, BNC and TNC have become readily
>available...
>
>(excerpted)
>"However, because these connectors have become readily available, they are no
>longer considered sufficient to demonstrate compliance with Section 15.203.
>Therefore, 30 days from the date of this Public Notice, we will no longer
>accept MMCX, MCX, and reverse polarity SMA, BNC, and TNC type antenna
>connector for meeting the requirements in Section 15.203 for all Part 15
>transmitters. This action is being taken to inform applicants and
>manufacturers of this change in policy with respect to the aforementioned
>connectors."
>
>In light of the mass market, large scale manufacturing world we now live in,
>it is the OPINION of this amateur operator that the FCC will be repeatedly
>pushed into making similar Public Notices for products that do not have fixed
>antennas. The presence of a fixed antenna has not prevented me from
>converting a Part 15 device into a Part 97 device but a little more
>creativity may be called for with products newly Certified since last week.
>
>By the way, don't forget to make sure your callsign is routinely sent to keep
>notes from Mr. Hollingsworth out of your mailbox.
>
>Cheers,
>Dave McBrayer, N6OJJ
>in the heart of the San Francisco Bay metro area
>
>---
>You are currently subscribed to ss as: john@hansen.net
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

48. [ss] Re: Part 15 device conversions

From: Jeff King <jeff@aerodata.net>
Date: Mon, 26 Jun 2000 13:06:49 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93079-2000.06.26-12.08.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Daven6ojj@aol.com wrote:

> In light of the mass market, large scale manufacturing world we now live in,
> it is the OPINION of this amateur operator that the FCC will be repeatedly
> pushed into making similar Public Notices for products that do not have fixed
> antennas.

Kind of like chasing your tail. Isn't that what keeps most in government
employed? ;-)

But one thing I have noted, is that the actually PCB lands are EXCACTLY the
same for standard SMA connectors for many of the oddball connectors. (at least
on the FreeWave and the WaveLan). So, get you trusting soldering iron and
desoldering wick out, remove the connector, and order a standard connector
from DigiKey. Easy.

Lots easier then using human engineeriing to get the oddball OEM connectors.

-Jeff

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

49. [ss] Re: Part 15 device conversions

From: Jeff King <jeff@aerodata.net>
Date: Mon, 26 Jun 2000 13:14:29 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93082-2000.06.26-12.16.51--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

John:

John Hansen wrote:

> What I don't understand is why the BreezeCom units that I've bought have
> standard SMA connectors on them. Even the unit I had repaired last year
> (with a brand new transmitter board and connectors) came with standard SMA.

I can't speak for BreezeCom, but Cycomm(sp?) had a N connector on their unit
for some time, the unit had a exemption for "professional installation" only, whatever
that means. FreeWave also has the same thing, although at quite a premium over
the normal unit. See: http://www.freewave.com/professionalseries.html

Changing the subject, would you be so kind as to give a few comments on the
BreezeCom's? Your link distance, terrain, antennas, height, model number, cost etc. Also
if you did any work with them in Urban environments, with one end having a antenna
less then optimal and/or mobile.

Thanks!

Jeff

P.S. You get those 16F877's?

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

50. [ss] Re: Part 15 device conversions

From: Bob Nielsen <nielsen@oz.net>
Date: Mon, 26 Jun 2000 10:50:31 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93091-2000.06.26-12.54.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, Jun 26, 2000 at 01:14:29PM -0400, Jeff King wrote:
>
> Changing the subject, would you be so kind as to give a few comments on the
> BreezeCom's? Your link distance, terrain, antennas, height, model number, cost etc. Also
> if you did any work with them in Urban environments, with one end having a antenna
> less then optimal and/or mobile.

It would be great if this type of data on the various available
hardware could be compiled (and possibly put on the TAPR web site).

Along that line, does anyone have any information on 900 MHz
propagation through trees, etc. I know that 440 isn't too bad, while
2.4 GHz is quite lossy, but have not had any experience at 900. Since
relocating from the desert, I have come across some new challenges.

Bob

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

51. [ss] Re: Part 15 device conversions

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 26 Jun 2000 13:58:20 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93094-2000.06.26-13.06.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I agree with Bob, if we just had a list of this stuff, as people find it
if there was a place they could send that data to and have it added
to a page, that would be a excellent idea.

> -----Original Message-----
> From: Bob Nielsen [SMTP:nielsen@oz.net]
> Sent: Monday, June 26, 2000 13:51

> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 15 device conversions
>
> It would be great if this type of data on the various available
> hardware could be compiled (and possibly put on the TAPR web site).
>
> Along that line, does anyone have any information on 900 MHz
> propagation through trees, etc. I know that 440 isn't too bad, while
> 2.4 GHz is quite lossy, but have not had any experience at 900. Since
> relocating from the desert, I have come across some new challenges.
>
> Bob
>
> --
> Bob Nielsen, N7XY   nielsen@oz.net
> Bainbridge Island, WA   http://www.oz.net/~nielsen
>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

52. [ss] Re: Part 15 device conversions

From: adesjard@cme.com
Date: Mon, 26 Jun 2000 13:14:14 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93098-2000.06.26-13.18.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Aironet's Website http://www.aironet.com has a link calculation tool, and it should work for most 2.4 Ghz part 15 SS units. My experience is that at any distance over 1/2 mile at 2.4Ghz your path must be absolutely clear - no leaves at all. 900 Mhz seems to be more forgiving, going through many obstruction. Metricom " http://www.metricom.com " is deploying a lot of 900 Mhz SS units in many cities, about 20 major metros as I recall. It could make things interesting for us Hams, as they are using Omni and Planar antennas.

Alan DesJardins N5VXL
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Bob Nielsen
Sent: Monday, June 26, 2000 12:51 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Part 15 device conversions

On Mon, Jun 26, 2000 at 01:14:29PM -0400, Jeff King wrote:
>
> Changing the subject, would you be so kind as to give a few comments on
the
> BreezeCom's? Your link distance, terrain, antennas, height, model number,
cost etc. Also
> if you did any work with them in Urban environments, with one end having a
antenna
> less then optimal and/or mobile.

It would be great if this type of data on the various available
hardware could be compiled (and possibly put on the TAPR web site).

Along that line, does anyone have any information on 900 MHz
propagation through trees, etc. I know that 440 isn't too bad, while
2.4 GHz is quite lossy, but have not had any experience at 900. Since
relocating from the desert, I have come across some new challenges.

Bob

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

53. [ss] Re: Part 15 device conversions

From: adesjard@cme.com
Date: Mon, 26 Jun 2000 13:16:14 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93101-2000.06.26-13.20.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

One reference you MUST have if you're looking at converting Part 15 units is
the Pasternack Enterprises catalog. Check them at http://www.pasternack.com
. They are probably the single biggest reason the FCC wants to get away
from reverse polarity connectors.

Alan DesJardins N5VXL
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Hast, Chuck
Sent: Monday, June 26, 2000 12:58 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Part 15 device conversions

I agree with Bob, if we just had a list of this stuff, as people find it
if there was a place they could send that data to and have it added
to a page, that would be a excellent idea.

> -----Original Message-----
> From: Bob Nielsen [SMTP:nielsen@oz.net]
> Sent: Monday, June 26, 2000 13:51
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 15 device conversions
>
> It would be great if this type of data on the various available
> hardware could be compiled (and possibly put on the TAPR web site).
>
> Along that line, does anyone have any information on 900 MHz
> propagation through trees, etc. I know that 440 isn't too bad, while
> 2.4 GHz is quite lossy, but have not had any experience at 900. Since
> relocating from the desert, I have come across some new challenges.
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> Bob
>
> --
> Bob Nielsen, N7XY   nielsen@oz.net
> Bainbridge Island, WA   http://www.oz.net/~nielsen
>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

54. [ss] Re: Part 15 device conversions

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Mon, 26 Jun 2000 14:32:21 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93105-2000.06.26-13.36.36--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The figure I've seen is 1dB loss per meter of "dense foliage" at
915mhz. I think that comes from William Lee's Mobile Communications
Engineering somewhere. Rappaport's done some 900mhz analysis.

I'm doing my first 900mhz part 15 project now and for propagation
in suburban environments we're assuming path loss exponents of 2 for
first meter, 3 for next 10 meters, and 4 beyond that. Just a simple
guess but it seems to match other empirical studies reasonably well.

Much of the existing work is from cellular industry and assumes one
high antenna, so you need to be careful.

> -----Original Message-----
> From: bounce-ss-9486@lists.tapr.org
> [mailto:bounce-ss-9486@lists.tapr.org]On Behalf Of Bob Nielsen
> Sent: Monday, June 26, 2000 1:51 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 15 device conversions
>
> On Mon, Jun 26, 2000 at 01:14:29PM -0400, Jeff King wrote:
> >
> > Changing the subject, would you be so kind as to give a few
> comments on the
> > BreezeCom's? Your link distance, terrain, antennas, height,
> model number, cost etc. Also
> > if you did any work with them in Urban environments, with one
> end having a antenna
> > less then optimal and/or mobile.
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> It would be great if this type of data on the various available
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> propagation through trees, etc. I know that 440 isn't too bad, while
> 2.4 GHz is quite lossy, but have not had any experience at 900. Since
> relocating from the desert, I have come across some new challenges.
>
> Bob
>
> --
> Bob Nielsen, N7XY   nielsen@oz.net
> Bainbridge Island, WA   http://www.oz.net/~nielsen
>
> ---
> You are currently subscribed to ss as: khs@ieee.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

55. [ss] Re: Part 15 device conversions

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Mon, 26 Jun 2000 14:51:23 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93109-2000.06.26-13.55.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I thought that Metricom was moving to licensed spectrum. IMO they
had no business using part 15 rules for omni fixed poletop installations
in the first place.

Their site does seem like they're going ahead with 900mhz and 2.4ghz deployments, though I'm pretty sure they've got some UHF licenses.

What'll they do when Bluetooth saturates 2.4ghz?

> -----Original Message-----
> From: bounce-ss-9486@lists.tapr.org
> [mailto:bounce-ss-9486@lists.tapr.org]On Behalf Of adesjard@cme.com
> Sent: Monday, June 26, 2000 2:14 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 15 device conversions
>
> Aironet's Website http://www.aironet.com has a link calculation tool, and it should work for most 2.4 Ghz part 15 SS units. My experience is that at any distance over 1/2 mile at 2.4Ghz your path must be absolutely clear - no leaves at all. 900 Mhz seems to be more forgiving, going through many obstruction. Metricom " http://www.metricom.com " is deploying a lot of 900 Mhz SS units in many cities, about 20 major metros as I recall. It could make things interesting for us Hams, as they are using Omni and Planar antennas.
>
> Alan DesJardins N5VXL
> RF Network Engineer
> Chicago Mercantile Exchange
> MIS Systems
> 30 S. Wacker Drive
> Chicago, IL 60606
> 312-338-2853
> adesjard@cme.com
>
> -----Original Message-----
> From: bounce-ss-12965@lists.tapr.org
> [mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Bob Nielsen
> Sent: Monday, June 26, 2000 12:51 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 15 device conversions
>
> On Mon, Jun 26, 2000 at 01:14:29PM -0400, Jeff King wrote:
> >
> > Changing the subject, would you be so kind as to give a few comments on the
> > BreezeCom's? Your link distance, terrain, antennas, height, model number, cost etc. Also
> > if you did any work with them in Urban environments, with one end having a antenna
> > less then optimal and/or mobile.
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>
> Along that line, does anyone have any information on 900 MHz propagation through trees, etc. I know that 440 isn't too bad, while 2.4 GHz is quite lossy, but have not had any experience at 900. Since relocating from the desert, I have come across some new challenges.
>
> Bob
>
> --
> Bob Nielsen, N7XY nielsen@oz.net
> Bainbridge Island, WA http://www.oz.net/~nielsen
>
> ---
> You are currently subscribed to ss as: adesjard@cme.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
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---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

56. [ss] Re: Part 15 device conversions

From: adesjard@cme.com
Date: Mon, 26 Jun 2000 14:08:30 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93116-2000.06.26-14.12.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As I heard it the UHF Licensed freqs were to connect the remote access
points back to the network station. I'm sure I'm not using the correct
terms for their stuff, but the jist is that the licensed stuff is backbone.

Alan DesJardins N5VXL
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Kenneth H. Sinclair
Sent: Monday, June 26, 2000 1:51 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Part 15 device conversions

I thought that Metricom was moving to licensed spectrum. IMO they
had no business using part 15 rules for omni fixed poletop installations
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Their site does seem like they're going ahead with 900mhz and 2.4ghz
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What'll they do when Bluetooth saturates 2.4ghz?

> -----Original Message-----
> From: bounce-ss-9486@lists.tapr.org
> [mailto:bounce-ss-9486@lists.tapr.org]On Behalf Of adesjard@cme.com
> Sent: Monday, June 26, 2000 2:14 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Part 15 device conversions
>
> Aironet's Website http://www.aironet.com has a link
> calculation tool, and
> it should work for most 2.4 Ghz part 15 SS units. My
> experience is that at
> any distance over 1/2 mile at 2.4Ghz your path must be
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> leaves at all. 900 Mhz seems to be more forgiving, going through many
> obstruction. Metricom " http://www.metricom.com " is deploying
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> Alan DesJardins N5VXL
> RF Network Engineer
> Chicago Mercantile Exchange
> MIS Systems
> 30 S. Wacker Drive

Chicago, IL 60606
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adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Bob Nielsen
Sent: Monday, June 26, 2000 12:51 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: Part 15 device conversions

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> Changing the subject, would you be so kind as to give a few comments on
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> BreezeCom's? Your link distance, terrain, antennas, height, model number,
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2.4 GHz is quite lossy, but have not had any experience at 900. Since
relocating from the desert, I have come across some new challenges.

Bob

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

57. [ss] Re: ss digest: June 25, 2000

From: "Mark Barner" <barnermark@hotmail.com>
Date: Mon, 26 Jun 2000 12:56:47 PDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93125-2000.06.26-15.00.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

An open letter to all interested parties.

Fellow Hams;

With all due respect to those opposed and allied...

TAPR is doing what TAPR does best - serve its members. Since I am not a
member of TAPR (I live in Anaheim, CA) I am in no position to criticize or
praise their efforts. However, some of their SS projects have provided
useful information for my own SS project, so I have no complaint with TAPR.

Instead, my complaint is against the local Amateur Radio Operator comunity.

Recently, I acquired some equipment and set up shop for SS R&D. Then I discretely approached a couple of Ham clubs in my area (L.A./Orange Counties) with the suggestion of starting a local SS repeater project similar to TAPR's. Whether or not the club already has an SS project going, the responses have been consistently underwhelming - usually along the lines of, "Pay our fees, join our club, learn The Code, get your 2 by 2, and then we'll discuss it."

It seems to me that there is considerable inertia amongst the established club memberships in favor of the "traditional" realms of Amateur Radio interest - "The Code", Amtor, HFSSB, and VHF/UHF-FM, as well as a distinct proprietary attitude toward Amateur Radio technology. Merely to suggest interest in something as esoteric as Packet, Ham TV and Spread-Spectrum technology is to invite derision and condescension from the more established individual Amateur Radio Operators.

Hiram Percy Maxim made many of his advances without the burden of an amateur radio club. Hedy Lamarr did not even have a ham license when she invented spread-spectrum technology back in the early 1940's, yet 60 years later, her invention is being ignored en masse by the ham community while commercial interests use it to acquire more of our spectrum space. TAPR, or a few essential members thereof, are doing the rest of us a favor by publishing any of the results of their research.

Since the local clubs seem to have little interest in outsider research in SS, I will proceed to develop an SS/IP system on my own, however accurate or inaccurate my information may be.

So please stop bickering about who is more accurate, why SS development should or should not occur within the ham community, whether or not clubs have more right to spectrum space over individuals, or which commercial system is better. Just do the *&^%$#@ research and develop a viable SS/IP system for Amateur Radio!

Respectfully;

KE6BOL op Mark

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

58. [ss] RE: Part 15 device conversions

From: Daven6ojj@aol.com
Date: Mon Jun 26 16:27:58 2000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93127-2000.06.26-15.32.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck Hast asked if the FCC position on "reverse connectors" affects any products previously Certified and in current production -

No, the Public Notice affects only new Certifications issued after June 23, 2000. It would seem current production is not affected.

cheers,
Dave McBrayer, N6OJJ
In the heart of the San Francisco Bay Area

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

59. [ss] Re: ss digest: June 25, 2000

From: Bob Nielsen <nielsen@oz.net>
Date: Mon, 26 Jun 2000 15:13:53 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93149-2000.06.26-17.17.45--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

On Mon, Jun 26, 2000 at 12:56:47PM -0700, Mark Barner wrote:
> An open letter to all interested parties.
>
> Fellow Hams;
>
> With all due respect to those opposed and allied...
>
> TAPR is doing what TAPR does best - serve its members. Since I am not a
> member of TAPR (I live in Anaheim, CA) I am in no position to criticize or
> praise their efforts. However, some of their SS projects have provided
> useful information for my own SS project, so I have no complaint with TAPR.

Mark,

There are probably more TAPR members in Anaheim than in Tucson, so
don't let that deter you. In spite of the name, TAPR is truly an
international organization (there are several local ham clubs in
Tucson, as well). None of the current TAPR board officers or members
reside in Tucson and the TAPR office moved to Denton, TX several years
ago.

73, Bob (formerly of Tucson)

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

60. [ss] SS Unpopular

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 26 Jun 2000 15:14:41 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93150-2000.06.26-17.19.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Count me in.
And I personalty know of several others.

Were you at the SS symposia when the ARRL SW convention was on the QM the
year before it was in Rverside (Five years ago, IIRC)?

The reaction to SS was absolutly intolerant!

I have given several pro-SS at ham clubs.
The usual rank and file reaction is "gee this is a good idea - where can I
buy an appliance so my head won't hurt?".

I think there are three problems:
    It is counterintuitive...
       A lot of fuss was made about spectrum efficiency re SSB.

    It is experimental (ie no appliance)...
       If A&A or Ramsey or Hamtronics or Kanga, or Whoever would just put
out a kit

    Very few clubs are technical...
       I tried teaching a technical class at my club - hard core.

BTW, What difference does it make that you live in Anaheim being a member
of TAPR?
TAPR isn't in Arizona either!!! :>

73 de KN6TD (who builds gear)

(s) Derek

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

61. [ss] Re: Part 15 device conversions

From: "Shawn T. Rutledge" <rutledge@cx47646-a.phnx1.az.home.com>
Date: Mon, 26 Jun 2000 15:16:37 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93152-2000.06.26-17.20.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, Jun 26, 2000 at 10:50:31AM -0700, Bob Nielsen wrote:
> On Mon, Jun 26, 2000 at 01:14:29PM -0400, Jeff King wrote:
> >
> > Changing the subject, would you be so kind as to give a few comments on the
> > BreezeCom's? Your link distance, terrain, antennas, height, model number, cost etc. Also
> > if you did any work with them in Urban environments, with one end having a antenna
> > less then optimal and/or mobile.
>
> It would be great if this type of data on the various available
> hardware could be compiled (and possibly put on the TAPR web site).

Sounds like TAPR needs a wiki. See
http://gw.kb7pwd.ampr.org:9673/zwiki/SlateComputers/
for an example of what one looks like. It allows people to collaborate
and add information to web pages. Better mechanisms for this will evolve
but for now, this is the best I've seen. You cannot build communities
by having only a privileged few who can actually post information.

--
  _______   Shawn T. Rutledge / KB7PWD ecloud@bigfoot.com
 (_ | |_)   http://www.bigfoot.com/~ecloud kb7pwd@kb7pwd.ampr.org
 __) | | ____
Get money for spare CPU cycles at http://www.ProcessTree.com/?sponsor=5903

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

62. [ss] RE: Part 15 device conversions

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Tue, 27 Jun 2000 09:05:00 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93168-2000.06.26-18.09.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hmm, better keep an eye on this one... Hopefully our agencies take a bit
longer to come to similar decisions, and we can get some of them "dumped" on
our shores at bargainn basement prices while the window of opportunity
exists. ;-)

Tony Langdon.
Systems Development and Support.
ATC Training Australasia. Level 2 321 Exhibition St Melbourne 3000.
Phone: 1300 13 1983   WWW: http://www.atctraining.com.au

> -----Original Message-----
> From: Hast, Chuck [mailto:wchast@utilpart.com]
> Sent: Tuesday, 27 June 2000 2:01
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: Part 15 device conversions
>
>
> Does this mean that the load of stuff in production now will be
> dumped at reduced cost (windfall for us?)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

63. [ss] Re: Part 15 device conversions

From: Brett Glass <brett@lariat.org>
Date: Mon, 26 Jun 2000 17:59:43 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93188-2000.06.26-19.04.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, Metricom is monopolizing the 900 MHz band in many cities precisely
because signals in that range can penetrate walls and trees somewhat.
The company is not nearly as interested in 2.4 GHz because it has more
problems with that.

The problem is that by deploying hundreds of 900 MHz hoppers
in a relatively small geographic area, Metricom ruins the band for most
or all other point-to-multipoint users. It is possible to do
point-to-point links with highly directional antennas, but the deployment
of other networks similar to Metricom's becomes infeasible because those
networks will be subject to dropouts, long latencies (due to
retransmission) and interference. What's more, Metricom's transmitters
appear to be programmed to increase power to the maximum legal limit in
the presence of a competing signal. Any other user of the band may be
"swarmed" by Metricom's army of transmitters when he speaks up.

If you're a licensed amateur and are operating under Part 97, you
can simply jack up YOUR power to get over the noise and you will
win the "arms race." But this hurts other unlicensed users still
more. Any investment they may have made in unlicenced spread spectrum
equipment -- as much as $3K per node -- may be lost.

It's a tragedy of the commons.

--Brett

At 12:14 PM 6/26/2000, adesjard@cme.com wrote:

>Aironet's Website http://www.aironet.com has a link calculation tool, and
>it should work for most 2.4 Ghz part 15 SS units. My experience is that at
>any distance over 1/2 mile at 2.4Ghz your path must be absolutely clear - no
>leaves at all. 900 Mhz seems to be more forgiving, going through many
>obstruction. Metricom " http://www.metricom.com " is deploying a lot of 900
>Mhz SS units in many cities, about 20 major metros as I recall. It could
>make things interesting for us Hams, as they are using Omni and Planar
>antennas.
>
>
>Alan DesJardins N5VXL
>RF Network Engineer
>Chicago Mercantile Exchange
>MIS Systems
>30 S. Wacker Drive
>Chicago, IL 60606
>312-338-2853
>adesjard@cme.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

64. [ss] Re: Part 15 device conversions

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Tue, 27 Jun 2000 09:10:42 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93259-2000.06.27-00.01.05--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Kind of like chasing your tail. Isn't that what keeps most in
> government
> employed? ;-)

Hehe, sounds like paper shuffling is as much a sport on your side of the
Pacific as it is here. :-)
>
> But one thing I have noted, is that the actually PCB lands
> are EXCACTLY the
> same for standard SMA connectors for many of the oddball
> connectors. (at least
> on the FreeWave and the WaveLan). So, get you trusting
> soldering iron and
> desoldering wick out, remove the connector, and order a
> standard connector
> from DigiKey. Easy.
>
> Lots easier then using human engineeriing to get the oddball
> OEM connectors.

Seems the way to go. If you go SMA, then it's easy to interface the devices
with a lot of other gear, and avoid having to make a whole heap of special
adapter cables.

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65. [ss] RE: Metricom (renamed)

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Tue, 27 Jun 2000 07:22:12 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93301-2000.06.27-06.26.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yeah, but they are hoppers, and other hoppers can contend with them
somewhat successfully. Do you have any info about their emitted spectrum?

    -----Original Message-----
    From: bounce-ss-9486@lists.tapr.org
    [mailto:bounce-ss-9486@lists.tapr.org]On Behalf Of Brett Glass
    Sent: Monday, June 26, 2000 8:00 PM
    To: TAPR Spread Spectrum Special Interest Group
    Subject: [ss] Re: Part 15 device conversions

    Yes, Metricom is monopolizing the 900 MHz band in many cities precisely
    because signals in that range can penetrate walls and trees somewhat.
    The company is not nearly as interested in 2.4 GHz because it has more
    problems with that.

    The problem is that by deploying hundreds of 900 MHz hoppers
    in a relatively small geographic area, Metricom ruins the band for most
    or all other point-to-multipoint users. It is possible to do
    point-to-point links with highly directional antennas, but the
    deployment
    of other networks similar to Metricom's becomes infeasible because those
    networks will be subject to dropouts, long latencies (due to
    retransmission) and interference. What's more, Metricom's transmitters
    appear to be programmed to increase power to the maximum legal limit in
    the presence of a competing signal. Any other user of the band may be
    "swarmed" by Metricom's army of transmitters when he speaks up.

    If you're a licensed amateur and are operating under Part 97, you
    can simply jack up YOUR power to get over the noise and you will
    win the "arms race." But this hurts other unlicensed users still
    more. Any investment they may have made in unlicenced spread spectrum
    equipment -- as much as $3K per node -- may be lost.

    It's a tragedy of the commons.

    --Brett

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

66. [ss] Re: ss digest: June 25, 2000

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Tue, 27 Jun 2000 09:32:25 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93308-2000.06.27-07.33.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> An open letter to all interested parties.
>
> Fellow Hams;
>
> With all due respect to those opposed and allied...

<snip>

> So please stop bickering about who is more accurate, why SS
> development
> should or should not occur within the ham community, whether
> or not clubs
> have more right to spectrum space over individuals, or which
> commercial
> system is better. Just do the *&^%$#@ research and develop a
> viable SS/IP
> system for Amateur Radio!

Well said! What we need is more R&D. If more of us can work together, it
might make it faster, otherwise we'll have to plod along slowly.

As for club involvements, I wish we had more (cost effective) access to some
of the SS devices down here in VK. Wouldn't take long to rostlu up a
handful of people willing to experiment, if we can get the gear without
breaking the band... (unfortunately, the exchange rate between the US
dollar and the 'South pacific Peso' (AKA Aussie dollar) almost doubles the
price when the stuff hits our shores. :-().

We're just taking it slowly until the opportunity comes along

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

67. [ss] Re: ss digest: June 25, 2000

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Tue, 27 Jun 2000 23:20:03 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org
Message-ID: <LYR6751-93317-2000.06.27-08.24.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Jun 27, 2000 at 09:32:25AM +1000, Tony Langdon wrote:
> As for club involvements, I wish we had more (cost effective) access to some
> of the SS devices down here in VK. Wouldn't take long to rostlu up a
> handful of people willing to experiment, if we can get the gear without
> breaking the band... (unfortunately, the exchange rate between the US

Count me in in any experimentation.

I've been reading up on DSSS. Quite interesting stuff. I'm intrigued
by the digital side of it (I work as an electronics engineer on digital
stuff).

FPGAs would make a good test platform, but an FPGA evaluation
board is very expensive, especially in Australian dollars. For example
the cheapest I've seen is $159 US (from a company in Brazil, www.aee.com.br),
with a Xilinx XCS05-4 FPGA with 32kB of 100ns RAM.

An XCS05 FPGA contains 360 flip flops. A PN generator with a L = 7 bit word
has 2^L-1 = 127 combinations, so a single matched filter will use
127 of those 360 flip flops. It's very difficult to use all of them
anyway due to limited routing resources.

For an extra $18 US you can get an 4005E FPGA, which has 616 flip flops
(well worth the extra money). For $79 US extra (above the $159), you
can get a 4010E FPGA, which has 1,120 flip flops.

If you wanted to make your own board, 4K devices up to the 4010 are
available in 84-pin PLCC packages; 61 of these pins are available for
user I/O. Bigger devices are only available in quad flat pack or
BGA packages.

You can buy a XC5202-PC84 FPGA for about $20 (in 1 off) here in
Australia.. nice and cheap. Same FPGA used in the YAM packet modem
(www.microlet.com/yam). It only has 360 flip flops though.

The best FPGA for this sort of thing is the Virtex, but the cheapest
evaluation board I saw was about US$575 (with an XCV50-6 FPGA, the smallest
and flowest of the family). You can readily get up to an XCV800,
which costs about US$900 extra. (XCV50 has about 1536 flip flops).

Don't ask the price of the software tools to work with these things.

Just a few things I've discovered in some recent research.
Hope these figures are of use to someone.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

68. [ss] Re: ss digest: June 25, 2000

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Tue, 27 Jun 2000 23:37:38 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93324-2000.06.27-08.41.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Jun 27, 2000 at 11:20:03PM +1000, Hamish Moffatt wrote:
> FPGAs would make a good test platform, but an FPGA evaluation
> board is very expensive, especially in Australian dollars. For example
> the cheapest I've seen is $159 US (from a company in Brazil, www.aee.com.br),
> with a Xilinx XCS05-4 FPGA with 32kB of 100ns RAM.

Update: you can get a board with 32KB of RAM and an XCS10 FPGA
(616 flip flops) from www.xess.com for $159, or with 128kb RAM for
$189. That's a better deal than the Brazilian company.

Or with a 4010E (1120 flip flops) for $209/$239. Not a bad deal.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

69. [ss] Re: ss digest: June 25, 2000

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 27 Jun 2000 06:38:15 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93327-2000.06.27-08.44.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>The best FPGA for this sort of thing is the Virtex, but the cheapest
>evaluation board I saw was about US$575 (with an XCV50-6 FPGA, the smallest
>and flowest of the family). You can readily get up to an XCV800,
>which costs about US$900 extra. (XCV50 has about 1536 flip flops).

The APrtan 2 is much more cost effective and is based on VIrtex technology.
150,000 gate version is $21.60 in signel qty here in the U.S.

>Don't ask the price of the software tools to work with these things.

$95 from Xilinx for their entry level system, licensed for 1 year, schematic
entry, not Verilog/VHDL.

Enjoy!

Lyle

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

70. [ss] Re: ss digest: June 25, 2000

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 27 Jun 2000 06:44:11 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93328-2000.06.27-08.48.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Gotta learn to type...

>The APrtan 2 is much more cost effective and is based on VIrtex technology.
>150,000 gate version is $21.60 in signel qty here in the U.S.
Make that:

The Spartan 2 is much more cost effective and is based on Virtex technology.
150,000 gate version is $21.60 in single qty here in the U.S.

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

71. [ss] Re: ss digest: June 25, 2000

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Tue, 27 Jun 2000 23:54:14 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93331-2000.06.27-08.58.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Jun 27, 2000 at 06:44:11AM -0700, Lyle Johnson wrote:
> The Spartan 2 is much more cost effective and is based on Virtex technology.
> 150,000 gate version is $21.60 in single qty here in the U.S.

Sounds nice.

Questions:
Which device is that -- XC2S15?
4 flip flops per CLB * 96 CLBs = 384 flip flops. (That's a lot
smaller than the smallest Virtex. Interesting.)

Anyone doing prototype boards with these devices?

I don't know much about Spartan; the area I work in is
in the Virtex target market instead.

Thanks
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

72. [ss] Re: ss digest: June 25, 2000

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Tue, 27 Jun 2000 23:55:30 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93332-2000.06.27-08.59.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Jun 27, 2000 at 06:38:15AM -0700, Lyle Johnson wrote:
> $95 from Xilinx for their entry level system, licensed for 1 year, schematic
> entry, not Verilog/VHDL.

OK, quite reasonable. I have what I thought was Foundation base,
but it has VHDL/Verilog. Much better than schematic entry, IMHO.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

73. [ss] RE: SS Unpopular

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 27 Jun 2000 09:53:27 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93333-2000.06.27-09.01.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

There have been a small group of us carrying on off to one side,
about some of this. Our main point is that if we narrow this down
to data only (computer type data) then we narrow our audience
down too.

Here in the Tampa area there is a growing group (many of them
disgusted with the good old boy antics of the repeater council)
who are interested in SS from a voice/repeater view. But since
SS is inherently digital they can see quite readily that the data
stream could be a mix of both voice and data.

>From talking about the country (I travel a lot, was in Phoenix, El
Paso, and LA all last week) I am finding similar sentiments all

across this country and it appears that there are similar feelings
at least down in AU land (See some of Tony's comments). I am
sure that there are similar situations in other places, I can well
remember my years in Costa Rica, and some of the people there
who were interested in non-traditional modes of communications.

I believe if we widen our view a bit and can pull these people into
this activity we will gain a lot more interest and also a growing
pool of people who though not interested in the data side of it are
quite interested in doing voice through a SS system.

It is these other groups, who are looking around for a solution to
their problem that I believe we can use to help move this forward.
Here in Tampa the voice group has told me to find all I can about
it, find out about the equipment and they will work with me to try
to bring on line a SS device, sure initially we are probably going
to have to kludge something up, but once up and running we feel
we can attract a significant number of people over just because
it is different, and flies in the face of the "good old boy network"

When you have a major chunk of 440 pulled out of the digital area
and re-assigned to repeaters just to keep a group that is basically
using this spectrum for "private" and "commercial" use (if you go
to Miami and speak Spanish take a listen, there is stuff that will
make you go postal on 440) and yet they can not find spectrum
for real amateur work something is drastically wrong, and some one
or something has to come along and upset the cart. We believe
that this (SS) technology can do just that.

For you all that are working on the data side only, take a few days
and poke around, you might be real surprised at what comes to you,
that was my position, one person who I never would have thought
to have been interested in SS has turned out to be a major backer,
and this person is interested in voice only activities (well a system
that handles both voice and data has some very interesting possibilities
for him) the fact is a lot of these people see SS wireless LAN gear
and come to me and ask if this can be done using voice, and the
answer is of course, that is what CDMA is all about. Then of course
comes the next question, "why are we still dinking around with this
30-50 year old technology?" my quick response is because most
hams are old farts that do not care to keep up with technology, but
I think that is wrong, because several of the hams that kept me
pressing on to new stuff were "old farts" but their brain was young,
and of course I ain't no spring chicken my self. Most hams like
most people do not like change, view past history with am vs. ssb,
cw, vs. TTY, vs. amtor, vs. packet and so on and so forth. Hey I was
on the initial STA for AMTOR and can remember the TTY and CW
stations jamming us. For most of them CHANGE=BAD... Sad but
that is certainly how it appears, but this should not stop us.

Think about where and how we can use SS beyond the traditional
packet switch/node replacement, as much as I love packet, I would
also like to get these voice guys involved, hey voice is just more bits
for our network to handle... And most voice guys have $$ to spare.

Just my USD $0.02 worth

> -----Original Message-----
> From: Derek Lassen [SMTP:kn6td@clubnet.net]
> Sent: Monday, June 26, 2000 18:15
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] SS Unpopular
>
> Count me in.
> And I personalty know of several others.
>
> Were you at the SS symposia when the ARRL SW convention was on the QM the
> year before it was in Rverside (Five years ago, IIRC)?
>
> The reaction to SS was absolutly intolerant!
>
> I have given several pro-SS at ham clubs.
> The usual rank and file reaction is "gee this is a good idea - where can I
>
> buy an appliance so my head won't hurt?".
>
> I think there are three problems:
>   It is counterintuitive...
>   A lot of fuss was made about spectrum efficiency re SSB.

>
>   It is experimental (ie no appliance)...
>   If A&A or Ramsey or Hamtronics or Kanga, or Whoever would just put
> out a kit
>
>   Very few clubs are technical...
>   I tried teaching a technical class at my club - hard core.
>
> BTW, What difference does it make that you live in Anaheim being a member
> of TAPR?
> TAPR isn't in Arizona either!!! :>
>
>
> 73 de KN6TD (who builds gear)
>
> (s) Derek
>
>
>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

74. [ss] RE: SS Unpopular

From: Dave Pomeroy <dave_pomeroy@yahoo.com>
Date: Tue, 27 Jun 2000 07:22:48 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93344-2000.06.27-09.26.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chuck,
  I'm new to this wireless group and have a question.
When you say voice do you mean a digital repeater with
Analog to digital and digital to analog on the users
end? I think I have worded that right.
Thanks for your time.

--- "Hast, Chuck" <wchast@utilpart.com> wrote:
> There have been a small group of us carrying on off
> to one side,
> about some of this. Our main point is that if we
> narrow this down
> to data only (computer type data) then we narrow our
> audience
> down too.
>
> Here in the Tampa area there is a growing group
> (many of them
> disgusted with the good old boy antics of the
> repeater council)
> who are interested in SS from a voice/repeater view.
> But since
> SS is inherently digital they can see quite readily
> that the data
> stream could be a mix of both voice and data.
>
> >From talking about the country (I travel a lot, was
> in Phoenix, El
> Paso, and LA all last week) I am finding similar
> sentiments all
> across this country and it appears that there are
> similar feelings
> at least down in AU land (See some of Tony's
> comments). I am
> sure that there are similar situations in other
> places, I can well
> remember my years in Costa Rica, and some of the
> people there
> who were interested in non-traditional modes of
> communications.
>
> I believe if we widen our view a bit and can pull
> these people into
> this activity we will gain a lot more interest and

> also a growing
> pool of people who though not interested in the data
> side of it are
> quite interested in doing voice through a SS system.
>
> It is these other groups, who are looking around for
> a solution to
> their problem that I believe we can use to help move
> this forward.
> Here in Tampa the voice group has told me to find
> all I can about
> it, find out about the equipment and they will work
> with me to try
> to bring on line a SS device, sure initially we are
> probably going
> to have to kludge something up, but once up and
> running we feel
> we can attract a significant number of people over
> just because
> it is different, and flies in the face of the "good
> old boy network"
>
> When you have a major chunk of 440 pulled out of the
> digital area
> and re-assigned to repeaters just to keep a group
> that is basically
> using this spectrum for "private" and "commercial"
> use (if you go
> to Miami and speak Spanish take a listen, there is
> stuff that will
> make you go postal on 440) and yet they can not find
> spectrum
> for real amateur work something is drastically
> wrong, and some one
> or something has to come along and upset the cart.
> We believe
> that this (SS) technology can do just that.
>
> For you all that are working on the data side only,
> take a few days
> and poke around, you might be real surprised at what
> comes to you,
> that was my position, one person who I never would
> have thought
> to have been interested in SS has turned out to be a
> major backer,
> and this person is interested in voice only
> activities (well a system
> that handles both voice and data has some very
> interesting possibilities
> for him) the fact is a lot of these people see SS
> wireless LAN gear
> and come to me and ask if this can be done using
> voice, and the
> answer is of course, that is what CDMA is all about.
> Then of course
> comes the next question, "why are we still dinking
> around with this
> 30-50 year old technology?" my quick response is
> because most
> hams are old farts that do not care to keep up with
> technology, but
> I think that is wrong, because several of the hams
> that kept me
> pressing on to new stuff were "old farts" but their
> brain was young,
> and of course I ain't no spring chicken my self.
> Most hams like
> most people do not like change, view past history
> with am vs. ssb,
> cw, vs. TTY, vs. amtor, vs. packet and so on and so
> forth. Hey I was
> on the initial STA for AMTOR and can remember the
> TTY and CW
> stations jamming us. For most of them CHANGE=BAD...
> Sad but
> that is certainly how it appears, but this should
> not stop us.
>

> Think about where and how we can use SS beyond the
> traditional
> packet switch/node replacement, as much as I love
> packet, I would
> also like to get these voice guys involved, hey
> voice is just more bits
> for our network to handle... And most voice guys
> have $$ to spare.
>
> Just my USD $0.02 worth
>
> > -----Original Message-----
> > From: Derek Lassen [SMTP:kn6td@clubnet.net]
> > Sent: Monday, June 26, 2000 18:15
> > To: TAPR Spread Spectrum Special Interest Group
> > Subject: [ss] SS Unpopular
> >
> > Count me in.
> > And I personalty know of several others.
> >
> > Were you at the SS symposia when the ARRL SW
> convention was on the QM the
> > year before it was in Rverside (Five years ago,
> IIRC)?
> >
> > The reaction to SS was absolutly intolerant!
> >
> > I have given several pro-SS at ham clubs.
> > The usual rank and file reaction is "gee this is a
> good idea - where can I
> >
> > buy an appliance so my head won't hurt?".
> >
> > I think there are three problems:
> >   It is counterintuitive...
> >   A lot of fuss was made about spectrum
> efficiency re SSB.
> >
> >   It is experimental (ie no appliance)...
> >   If A&A or Ramsey or Hamtronics or Kanga, or
> Whoever would just put
> > out a kit
> >
> >   Very few clubs are technical...
> >   I tried teaching a technical class at my
> club - hard core.
> >
> > BTW, What difference does it make that you live in
> Anaheim being a member
> > of TAPR?
> > TAPR isn't in Arizona either!!! :>
> >
> >
> > 73 de KN6TD (who builds gear)
> >
> > (s) Derek
> >
> >
> >
> >
> > ---
> > You are currently subscribed to ss as:
> wchast@utilpart.com
> > To unsubscribe send a blank email to
> leave-ss-6751T@lists.tapr.org
>
> ---
> You are currently subscribed to ss as:
> dave_pomeroy@voyager.net
> To unsubscribe send a blank email to
> leave-ss-6751T@lists.tapr.org
>
>
>
>

=====
Dave Pomeroy K8DNP Southwest Michigan

_____
Do You Yahoo!?
Get Yahoo! Mail - Free email you can access from anywhere!
http://mail.yahoo.com/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

75. [ss] RE: SS Unpopular

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 27 Jun 2000 10:21:22 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93345-2000.06.27-09.30.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, a codec between the voice user and the data stream.

> -----Original Message-----
> From: Dave Pomeroy [SMTP:dave_pomeroy@yahoo.com]
> Sent: Tuesday, June 27, 2000 10:23
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: SS Unpopular
>
> Chuck,
>   I'm new to this wireless group and have a question.
> When you say voice do you mean a digital repeater with
> Analog to digital and digital to analog on the users
> end? I think I have worded that right.
> Thanks for your time.
>
> --- "Hast, Chuck" <wchast@utilpart.com> wrote:
> > There have been a small group of us carrying on off
> > to one side,
> > about some of this. Our main point is that if we
> > narrow this down
> > to data only (computer type data) then we narrow our
> > audience
> > down too.
> >
> > Here in the Tampa area there is a growing group
> > (many of them
> > disgusted with the good old boy antics of the
> > repeater council)
> > who are interested in SS from a voice/repeater view.
> > But since
> > SS is inherently digital they can see quite readily
> > that the data
> > stream could be a mix of both voice and data.
> >
> > >From talking about the country (I travel a lot, was
> > in Phoenix, El
> > Paso, and LA all last week) I am finding similar
> > sentiments all
> > across this country and it appears that there are
> > similar feelings
> > at least down in AU land (See some of Tony's
> > comments). I am
> > sure that there are similar situations in other
> > places, I can well
> > remember my years in Costa Rica, and some of the
> > people there
> > who were interested in non-traditional modes of
> > communications.
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> > I believe if we widen our view a bit and can pull
> > these people into
> > this activity we will gain a lot more interest and
> > also a growing
> > pool of people who though not interested in the data
> > side of it are
> > quite interested in doing voice through a SS system.
> >
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> > a solution to
> > their problem that I believe we can use to help move
> > this forward.
> > Here in Tampa the voice group has told me to find

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> > it, find out about the equipment and they will work
> > with me to try
> > to bring on line a SS device, sure initially we are
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> > to have to kludge something up, but once up and
> > running we feel
> > we can attract a significant number of people over
> > just because
> > it is different, and flies in the face of the "good
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> > and re-assigned to repeaters just to keep a group
> > that is basically
> > using this spectrum for "private" and "commercial"
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> > We believe
> > that this (SS) technology can do just that.
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> > that was my position, one person who I never would
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> > and this person is interested in voice only
> > activities (well a system
> > that handles both voice and data has some very
> > interesting possibilities
> > for him) the fact is a lot of these people see SS
> > wireless LAN gear
> > and come to me and ask if this can be done using
> > voice, and the
> > answer is of course, that is what CDMA is all about.
> > Then of course
> > comes the next question, "why are we still dinking
> > around with this
> > 30-50 year old technology?" my quick response is
> > because most
> > hams are old farts that do not care to keep up with
> > technology, but
> > I think that is wrong, because several of the hams
> > that kept me
> > pressing on to new stuff were "old farts" but their
> > brain was young,
> > and of course I ain't no spring chicken my self.
> > Most hams like
> > most people do not like change, view past history
> > with am vs. ssb,
> > cw, vs. TTY, vs. amtor, vs. packet and so on and so
> > forth. Hey I was
> > on the initial STA for AMTOR and can remember the
> > TTY and CW
> > stations jamming us. For most of them CHANGE=BAD...
> > Sad but
> > that is certainly how it appears, but this should
> > not stop us.
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> > Think about where and how we can use SS beyond the
> > traditional
> > packet switch/node replacement, as much as I love
> > packet, I would
> > also like to get these voice guys involved, hey
> > voice is just more bits
> > for our network to handle... And most voice guys
> > have $$ to spare.
> >
> > Just my USD $0.02 worth

> >
> > > -----Original Message-----
> > > From: Derek Lassen [SMTP:kn6td@clubnet.net]
> > > Sent: Monday, June 26, 2000 18:15
> > > To: TAPR Spread Spectrum Special Interest Group
> > > Subject: [ss] SS Unpopular
> > >
> > > Count me in.
> > > And I personalty know of several others.
> > >
> > > Were you at the SS symposia when the ARRL SW
> > convention was on the QM the
> > > year before it was in Rverside (Five years ago,
> > IIRC)?
> > >
> > > The reaction to SS was absolutly intolerant!
> > >
> > > I have given several pro-SS at ham clubs.
> > > The usual rank and file reaction is "gee this is a
> > good idea - where can I
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> > > I think there are three problems:
> > >   It is counterintuitive...
> > >   A lot of fuss was made about spectrum
> > efficiency re SSB.
> > >
> > >   It is experimental (ie no appliance)...
> > >   If A&A or Ramsey or Hamtronics or Kanga, or
> > Whoever would just put
> > > out a kit
> > >
> > >   Very few clubs are technical...
> > >   I tried teaching a technical class at my
> > club - hard core.
> > >
> > > BTW, What difference does it make that you live in
> > Anaheim being a member
> > > of TAPR?
> > > TAPR isn't in Arizona either!!! :>
> > >
> > >
> > > 73 de KN6TD (who builds gear)
> > >
> > > (s) Derek
> > >
> > >
> > >
> > >
> > > ---
> > > You are currently subscribed to ss as:
> > wchast@utilpart.com
> > > To unsubscribe send a blank email to
> > leave-ss-6751T@lists.tapr.org
> >
> > ---
> > You are currently subscribed to ss as:
> > dave_pomeroy@voyager.net
> > To unsubscribe send a blank email to
> > leave-ss-6751T@lists.tapr.org
> >
> >
> >
> >
>
>
> =====
> Dave Pomeroy K8DNP Southwest Michigan
>
> ____
> Do You Yahoo!?
> Get Yahoo! Mail - Free email you can access from anywhere!
> http://mail.yahoo.com/
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

76. [ss] Re: ss digest: June 25, 2000

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Wed, 28 Jun 2000 08:55:59 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org
Message-ID: <LYR6751-93454-2000.06.27-18.00.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Count me in in any experimentation.

I'll keep that in mind. BTW, are you on the VK SS list?

>
> I've been reading up on DSSS. Quite interesting stuff. I'm intrigued
> by the digital side of it (I work as an electronics engineer
> on digital
> stuff).

OK, wasn't sure what you did. Unfortunately, for a number of reasons, I
didn't go on with engineering, and am in the networking side of things. My
interesta in SS are:

1. The potential for data networking
2. Voice transmission (whether that be VoIP or direct onto the SS signal)
3. The experimental nature of SS (at least from an amateur standpoint)
4. Lots of potential uses for microwave frequencies that we need to use
more.

And more. :)

As for something to build, to include more people in the longer term, the
designs need to be reasonably cost effective and readily reproducible.
Unfortunately, I'm a bit rusty on the R&D side. :(

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

77. [ss] Re: ss digest: June 25, 2000

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 27 Jun 2000 17:25:24 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93461-2000.06.27-19.29.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

-----Original Message-----
From: bounce-ss-14410@lists.tapr.org
[mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Hamish Moffatt
Sent: Tuesday, June 27, 2000 6:54 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: ss digest: June 25, 2000

>On Tue, Jun 27, 2000 at 06:44:11AM -0700, Lyle Johnson wrote:
>> The Spartan 2 is much more cost effective and is based on Virtex
technology.
>> 150,000 gate version is $21.60 in single qty here in the U.S.

>Sounds nice.

>Questions:
>Which device is that -- XC2S15?

No, the XC2S150

>4 flip flops per CLB * 96 CLBs = 384 flip flops. (That's a lot
>smaller than the smallest Virtex. Interesting.)

864 CLBs; 3,888 logic gates; 12 RAM blocks; 49,152 RAM bits; 260 user I/O.

>Anyone doing prototype boards with these devices?

Don't know.

>I don't know much about Spartan; the area I work in is

>in the Virtex target market instead.

The Spartan2 is based on Virtex, unlike the earlier SPartans which were
based loosely on the 4000 series parts.

Enjoy!

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

78. [ss] Re: ss digest: June 25, 2000

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 28 Jun 2000 11:05:35 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93464-2000.06.27-20.09.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Jun 27, 2000 at 05:25:24PM -0700, Lyle Johnson wrote:
> >Questions:
> >Which device is that -- XC2S15?
>
> No, the XC2S150

For $21? That's amazingly cheap.

Xilinx would probably charge several hundred for a similar sized Virtex.

thanks
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

79. [ss] Re: ss digest: June 26, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Tue, 27 Jun 2000 21:26:12 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-93467-2000.06.27-20.29.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Propagation thru trees...

About a year ago (May, I think) there was an article on ISM band
propagation in Antennas & Propagation Mag. (Not the transactions). There
have also been several articles in Trans of A & P on this subject in the
past ten years. All (I believe) thru buildings, and done at Bell lab, or
whatever they call it now.

Another interesting article in Radio Science on 50 MHz propagation thru
jungle foilage on the Indian Sub-continent appeared sometime about 5 to 8
years ago.

Part 15 connectors...

Isn't a 6-32 screw still accecptable?

JIm Ussailis, W1EQO

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

80. [ss] The Role of Amateur Radio in the New Century

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Tue, 27 Jun 2000 18:33:59 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93469-2000.06.27-20.43.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Role of Amateur Radio in the New Century

Remarks by

Dale N. Hatfield (W0IFO)
Chief, Office on Engineering and Technology
Federal Communications Commission
at
AMRAD's 25th Anniversary Dinner
Falls Church, VA

June 17, 2000

<http://www.fcc.gov/Speeches/misc/dnh061700.html>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

81. [ss] Re: ss digest: June 25, 2000

From: "Graeme Zimmer" <gzimmer@bigpond.com>
Date: Wed, 28 Jun 2000 12:04:24 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93493-2000.06.27-21.32.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> BTW, are you on the VK SS list?

What? Who? VK SS List ?

Tony, where do I find this beast please ?

..... Zim VK3GJZ

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

82. [ss] Re: ss digest: June 25, 2000

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 27 Jun 2000 20:18:41 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93505-2000.06.27-22.23.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello again!

>On Tue, Jun 27, 2000 at 05:25:24PM -0700, Lyle Johnson wrote:
>> >Questions:
>> >Which device is that -- XC2S15?
>>
>> No, the XC2S150
>
>For $21? That's amazingly cheap.

Yes, it is. But that is an accurate price! I have confirmed it from three
sources.

Enjoy even more!

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

83. [ss] Re: ss digest: June 25, 2000

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Wed, 28 Jun 2000 14:07:29 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93509-2000.06.27-23.11.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

It's on egroups.com, and the list name to look for is vk-ssg

Tony Langdon.
Systems Development and Support.
ATC Training Australasia. Level 2 321 Exhibition St Melbourne 3000.
Phone: 1300 13 1983   WWW: http://www.atctraining.com.au

> -----Original Message-----
> From: Graeme Zimmer [mailto:gzimmer@bigpond.com]
> Sent: Wednesday, 28 June 2000 12:04
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: ss digest: June 25, 2000
>
>
>
> > BTW, are you on the VK SS list?
>
> What? Who? VK SS List ?
>
> Tony, where do I find this beast please ?
>
> ..... Zim VK3GJZ
>
>
> ---
> You are currently subscribed to ss as: tlangdon@atctraining.com.au
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

84. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Wed, 28 Jun 2000 09:23:42 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93543-2000.06.28-03.12.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Chuck,
>   I'm new to this wireless group and have a question.
> When you say voice do you mean a digital repeater with
> Analog to digital and digital to analog on the users
> end? I think I have worded that right.
> Thanks for your time.

I see two ways this can be achieved. The voice repeater could be digital,
as you state. This is particularly suitable for inter-repeater links and
voice networks. The alternate approach (which may be interesting for 'SS
repeaters') is to apply SS techniques to a conventional analog signal.

More than one way to skin a cat. :)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

85. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Wed, 28 Jun 2000 09:20:42 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93542-2000.06.28-03.12.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> There have been a small group of us carrying on off to one side,
> about some of this. Our main point is that if we narrow this down
> to data only (computer type data) then we narrow our audience
> down too.

Agreed. I made the point elsewhere that for many people, voice is more
attractive, due to the "human" element involved (i.e. talking directly to
other people in a natural manner, as opposed to interacting with a machine).

> Here in the Tampa area there is a growing group (many of them
> disgusted with the good old boy antics of the repeater council)
> who are interested in SS from a voice/repeater view. But since
> SS is inherently digital they can see quite readily that the data
> stream could be a mix of both voice and data.

It only makes sense. As I mentioned in my message to Hamish, I work with networks, and see technologies like voice over IP on a regular basis (and, in fact, relay our club news transmissions via the Internet every week). This technology on a suitable network has real possibilities, and what's not being used for voice is capacity to handle other data traffic. Even video is realistic, using modern compression algorithms to keep the data rate down to ISDN levels (linked ATV repeaters anyone? ;)).

> From talking about the country (I travel a lot, was in Phoenix, El
> Paso, and LA all last week) I am finding similar sentiments all
> across this country and it appears that there are similar feelings
> at least down in AU land (See some of Tony's comments). I am
> sure that there are similar situations in other places, I can well
> remember my years in Costa Rica, and some of the people there
> who were interested in non-traditional modes of communications.

Which is where this list comes in, it can be a focus to bring people with common interests together.

> I believe if we widen our view a bit and can pull these people into
> this activity we will gain a lot more interest and also a growing
> pool of people who though not interested in the data side of it are
> quite interested in doing voice through a SS system.

Agreed. the wider we cast the net, the more interested people we're likely to catch.

> It is these other groups, who are looking around for a solution to
> their problem that I believe we can use to help move this forward.
> Here in Tampa the voice group has told me to find all I can about
> it, find out about the equipment and they will work with me to try
> to bring on line a SS device, sure initially we are probably going
> to have to kludge something up, but once up and running we feel
> we can attract a significant number of people over just because
> it is different, and flies in the face of the "good old boy network"

For me, the attraction of SS is that it _is_ different, and it also has the possibility to open up whole new avenues for amateurs. Reminds me of my packet history. I got into packet in a big way in 1991. Back then, it was novel, landline speeds were 1200-2400 bps, with the odd lucky person having 9600, and 1200 bps packet was really something. Especially when wormholes came, and the modem users of the day were only calling their local BBS, with limited real time interaction (meanwhile I was off on a conference bridge in the US chatting away, and not even spending the 25c local call charge! :)).

For various reasons (financial), the old packet setup went, and when I became more active in the hobby in recent years, packet was well down the prioority list, because by the late 90's, the Internet was commonplace (I've been on the Net since 1994), and landline speeds are 56/33 kbps for much less than the cost of a 1200 bps TNC. Packet didn't hold much interest until "something different" came along, which is APRS. SS and high speed data would make me _very_ interested in digital work.

> When you have a major chunk of 440 pulled out of the digital area
> and re-assigned to repeaters just to keep a group that is basically
> using this spectrum for "private" and "commercial" use (if you go
> to Miami and speak Spanish take a listen, there is stuff that will
> make you go postal on 440) and yet they can not find spectrum
> for real amateur work something is drastically wrong, and some one
> or something has to come along and upset the cart. We believe
> that this (SS) technology can do just that.

Indeed. SS can do a lot, both in filling the spectrum with users (even if that's initially only for data/voice links, until more people get the gear together), and providing reasons to become a ham, and have the opportunity to play with new technology in ways that others can't.

> and this person is interested in voice only activities (well a system
> that handles both voice and data has some very interesting
> possibilities

Tell me about it! (think multicast and voice over IP, then patch in a few existing (narrowband FM) repeaters, and you should see what I mean. ;)).

> for him) the fact is a lot of these people see SS wireless LAN gear
> and come to me and ask if this can be done using voice, and the
> answer is of course, that is what CDMA is all about. Then of course
> comes the next question, "why are we still dinking around with this
> 30-50 year old technology?" my quick response is because most

> hams are old farts that do not care to keep up with technology, but
> I think that is wrong, because several of the hams that kept me
> pressing on to new stuff were "old farts" but their brain was young,
> and of course I ain't no spring chicken my self. Most hams like
> most people do not like change, view past history with am vs. ssb,
> cw, vs. TTY, vs. amtor, vs. packet and so on and so forth. Hey I was
> on the initial STA for AMTOR and can remember the TTY and CW
> stations jamming us. For most of them CHANGE=BAD... Sad but
> that is certainly how it appears, but this should not stop us.

Agreed. Those of us with the incentive need to push the barrow of change.
Sure, there is a time and place for the old modes (e.g. CW still shines
under certain circumstances, and will have its place on the bands for a long
time), but we need to advance the radio art, get back in the saddle and move
into the future. History has shown that most groundbreaking inventions have
been created by amateur experimenters in their own workshops. And we're
supposed to be the licenced experimenters of the airwaves. I find it rather
disappointing that there are not enough people pushing the envelope. It's
true that in these networked days, it takes more cooperation, and
traditionally amateurs have been solitary workers, when it comes to R&D.
However, the success of Linux shows what can be done with cooperation on a
large scale. Why not hams?

It's time to lay the old bogeyman of the Internet (which some say is killing
ham radio) to rest and use it for what it is, a tool for collaboration on a
scale never seen before. I'll place a bet that the Internet is going to be
one of the factors that will _stimulate_ the future growth of ham radio!

> Think about where and how we can use SS beyond the traditional
> packet switch/node replacement, as much as I love packet, I would
> also like to get these voice guys involved, hey voice is just
> more bits
> for our network to handle... And most voice guys have $$ to spare.

Given the changes over the last year or so, I'll have to write up an update
to my networking page and put the case forward for high speed network. :-)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

86. [ss] Proposal

From: Derek Lassen <kn6td@clubnet.net>
Date: Wed, 28 Jun 2000 03:12:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93546-2000.06.28-05.17.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

OK here is a forming idea:

I'm gong to call it R2K (Radio 2000).
R2K/R is q Repeater, R2K/H is a Handheld, R2K/M is a mobile.
Use your imagination for where a R2K/O is. :>

It should work on 440 to 450 MHz (all of it) :>
It should refuse to go below 440 or above 450.

It should have a 256KB bps hybrid DS/FH SS Modem, maybe 2 MHz chipping rate.
DS for gain, FH for loss (of hassles to land mobile).
I think the Zilog / Stel part (aka Z2000) would be good for this.
However I am beginning to think the prizm chipset might be better.

A transverter for baseband vs RF conversion.

Suggested codec / compression engine: Qualcom Q4413.

Rabbit 2000 for the processor.
Its kinda like a z80 on steroids, a development kit is $99, and it can be
cold loaded thru its first serial port.

Display from a cell phone (4 lines of 14 characters, plus status displays).
The keyboard and housing from said cell phone could be a good head start.
Used cell phones can be had on ebay for $1 up. And you get a battery and
charger too.

There would be lots of irony if we uses Startac's.... :>

Peak power:
For a R2K/H: +35 dBm,

For a R2K/M: +45 dBm,
For a R2K/R:+55 dBm,
For a R2K/O: +70 dBM.

Automatic power negotiation - less is better.

Protocol: Fixed length blocks (short), short addresses, Viterbi / Trellis
and Reed/Solomon Forward Error Correction. Sort of like ATM.

R2K/H will typically have one modem, but R2K/R will have several.

Every unit is a router. Every ham is an island. But he is part of an island
chain.

There would need to a protocol (and matching servers) developed, like ARP,
but which says "Ok, who's nearby who knows where we are?". Like a Time
Server, but returning Latitude / Longitude / Altitude.
(What should bigmamma.ampr.org return? Earth's current sideral coordinates.
:>)

Several audio streams could be mixed on an auxillary board at a R2K/R.

We out to be able to get a R2K/O put aboard the ISS.

Enough for now, gotta get some zzzzzzs.

73 de KN6TD

(s) Derek

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

87. [ss] Re: Proposal

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 28 Jun 2000 20:23:20 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93547-2000.06.28-05.27.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Jun 28, 2000 at 03:12:34AM -0700, Derek Lassen wrote:
> OK here is a forming idea:
>
> I'm gong to call it R2K (Radio 2000).
> R2K/R is q Repeater, R2K/H is a Handheld, R2K/M is a mobile.
> Use your imagination for where a R2K/O is. :>

Well, it's a grand plan. I like it though.

> It should work on 440 to 450 MHz (all of it) :>
> It should refuse to go below 440 or above 450.

For the US, yes. Here in Australia we have all of 420-450; 432-440
is normal voice stuff (repeaters, simplex, data and weak signal).
440-450 is ATV. I think 420-430 is also reserved for ATV, but is
less used than 440-450. So 420 would be better for us.

> A transverter for baseband vs RF conversion.

Yep. I think the modem itself should work on a 28 MHz IF or so
(just as the Grapes 56K modem does --- www.da4dsy.net for info).
Then a transverter can be used to select the band of interest.

I estimate the batteries on the hand held model will last about
five minutes with all the hardware you want to put in it :-)

73

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

88. [ss] RE: SS Unpopular

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 28 Jun 2000 20:26:11 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93548-2000.06.28-05.30.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Jun 28, 2000 at 09:20:42AM +1000, Tony Langdon wrote:
> Agreed. I made the point elsewhere that for many people, voice is more
> attractive, due to the "human" element involved (i.e. talking directly to
> other people in a natural manner, as opposed to interacting with a machine).

Yep. But I'd prefer to do voice as digital over SS, rather than
modulating directly with voice. Then you can just replace the codec/ADC
and use it for data as well.

Wouldn't have to be VoIP -- I think that might be overkill initially.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

89. [ss] RE: SS Unpopular

From: "Bloom, Jon, KE3Z" <jbloom@arrl.org>
Date: Wed, 28 Jun 2000 06:40:56 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93551-2000.06.28-05.48.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> > There have been a small group of us carrying on off to one side,
> > about some of this. Our main point is that if we narrow this down
> > to data only (computer type data) then we narrow our audience
> > down too.
>
> Agreed. I made the point elsewhere that for many people,
> voice is more
> attractive, due to the "human" element involved (i.e. talking
> directly to
> other people in a natural manner, as opposed to interacting
> with a machine).

Interesting related quote from this morning's InternetWeek newsletter:

"[Jeff] Hawkins, who invented the Palm computer, said the killer app for
smart phones will be better voice calling rather than wireless
data applications."

Jon, KE3Z

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90. [ss] RE: SS Unpopular

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Wed, 28 Jun 2000 07:31:42 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93556-2000.06.28-06.40.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lets face reality, most folks don't really want to peck at a keyboard,
they want to yack away into some sort of box.

Last night I was thinking about the collection of stuff I have in the lab
and the developers have out on the floor, here is what I have on my
desk:

1 Palm Pilot
1 Aironet PC card 2.4 ghz FH radio
1 Aironet network access point (look at it as the repeater)

Now it should not take much imagination to see a Palm like device with
a PC card slot, a mic and a small speaker. The same device runs software
which handles the voice side, and the data side is already part of the deal.

It would look to me like I already have a low power handheld data device
setting there on the bench. Am I not correct??

It would appear to me that getting the rest of this thing up and working is
just software once you get a PC card voice enabled palm device going.

You just route your data stream to whatever you want, if it is voice it
goes to a destination address which could be another ham or a non
ham on the land side network or if it is computer data it goes where all
good computer data goes. Hmm I am on the top floor of a 167 foot building
with 8 coax cables going to the roof, Guys I am off to find the developer
who
has the Aironet network access point device... And also see what kind of
palm type devices we have out there, I will be back...

> -----Original Message-----
> From: Bloom, Jon, KE3Z [SMTP:jbloom@arrl.org]
> Sent: Wednesday, June 28, 2000 06:41
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: SS Unpopular
>
> > > There have been a small group of us carrying on off to one side,
> > > about some of this. Our main point is that if we narrow this down
> > > to data only (computer type data) then we narrow our audience
> > > down too.
> >
> > Agreed. I made the point elsewhere that for many people,
> > voice is more
> > attractive, due to the "human" element involved (i.e. talking
> > directly to
> > other people in a natural manner, as opposed to interacting
> > with a machine).
>
> Interesting related quote from this morning's InternetWeek newsletter:
>
> "[Jeff] Hawkins, who invented the Palm computer, said the killer app for
> smart phones will be better voice calling rather than wireless
> data applications."
>
> Jon, KE3Z
>
> ---
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---
You are currently subscribed to ss as: lyris.ss@tapr.org
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91. [ss] Re: Proposal

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Wed, 28 Jun 2000 06:48:48 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93559-2000.06.28-06.53.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hamish Moffatt wrote:
>
> On Wed, Jun 28, 2000 at 03:12:34AM -0700, Derek Lassen wrote:
> > OK here is a forming idea:
> >
> > I'm gong to call it R2K (Radio 2000).
> > R2K/R is q Repeater, R2K/H is a Handheld, R2K/M is a mobile.
> > Use your imagination for where a R2K/O is. :>

R2K/S, maybe?

> Well, it's a grand plan. I like it though.

Me too.

> > It should work on 440 to 450 MHz (all of it) :>
> > It should refuse to go below 440 or above 450.
>

> For the US, yes. Here in Australia we have all of 420-450; 432-440
> is normal voice stuff (repeaters, simplex, data and weak signal).
> 440-450 is ATV. I think 420-430 is also reserved for ATV, but is
> less used than 440-450. So 420 would be better for us.

It looks more like a range than a hard rule, Hamish. Thus, we're saying
a 10 MHz spreading domain, overall, with a 2 MHz chippping rate (which
I'd prefer to see higher).

> > A transverter for baseband vs RF conversion.
>
> Yep. I think the modem itself should work on a 28 MHz IF or so
> (just as the Grapes 56K modem does --- www.da4dsy.net for info).
> Then a transverter can be used to select the band of interest.

Let's leave that as TBD (To Be Determined) and look at options. I agree
that transverter is a preferred route for this, but while we need to
pick an IF sometime, not on the first day of the project.

> I estimate the batteries on the hand held model will last about
> five minutes with all the hardware you want to put in it :-)

Then we need to be looking at newer battery technology;-)

73, gerry
--
Gerry Creager   gerry@cs.tamu.edu, gerry@page4.cs.tamu.edu
Network Engineering |Research focusing on
Computer Science Department |Satellite Geodesy and
Texas A&M University |Geodetic Control
979.458.4020 (Phone) -- 979.847.8578 (Fax)

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92. [ss] Interesting Idea

From: adesjard@cme.com
Date: Wed, 28 Jun 2000 07:17:29 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93560-2000.06.28-07.22.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You're on the right track. We've done some simmilar playing with our Casio
PA-2400 Windows CE devices and Proxim RangeLan2 cards. The casio has a mic
and a/d converter, but not being code writers the best we could to was to
digitally record files and send them over the RL2.

Incidentally, from the 20th floor of our building with an Access Point
inside but near the window with a 2.5dbi antenna we could use the network
almost 1 mile away, give or take for multipath and blockage. I would love
to put one of our 8dbi omni antennas on the roof (33 floors I think) and
really play with it.

Alan DesJardins N5VXL
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Hast, Chuck
Sent: Wednesday, June 28, 2000 6:32 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] RE: SS Unpopular

Lets face reality, most folks don't really want to peck at a keyboard,
they want to yack away into some sort of box.

Last night I was thinking about the collection of stuff I have in the lab
and the developers have out on the floor, here is what I have on my

desk:

1 Palm Pilot
1 Aironet PC card 2.4 ghz FH radio
1 Aironet network access point (look at it as the repeater)

Now it should not take much imagination to see a Palm like device with
a PC card slot, a mic and a small speaker. The same device runs software
which handles the voice side, and the data side is already part of the deal.

It would look to me like I already have a low power handheld data device
setting there on the bench. Am I not correct??

It would appear to me that getting the rest of this thing up and working is
just software once you get a PC card voice enabled palm device going.

You just route your data stream to whatever you want, if it is voice it
goes to a destination address which could be another ham or a non
ham on the land side network or if it is computer data it goes where all
good computer data goes. Hmm I am on the top floor of a 167 foot building
with 8 coax cables going to the roof, Guys I am off to find the developer
who
has the Aironet network access point device... And also see what kind of
palm type devices we have out there, I will be back...

> -----Original Message-----
> From: Bloom, Jon, KE3Z [SMTP:jbloom@arrl.org]
> Sent: Wednesday, June 28, 2000 06:41
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] RE: SS Unpopular
>
> > > There have been a small group of us carrying on off to one side,
> > > about some of this. Our main point is that if we narrow this down
> > > to data only (computer type data) then we narrow our audience
> > > down too.
> >
> > Agreed. I made the point elsewhere that for many people,
> > voice is more
> > attractive, due to the "human" element involved (i.e. talking
> > directly to
> > other people in a natural manner, as opposed to interacting
> > with a machine).
>
> Interesting related quote from this morning's InternetWeek newsletter:
>
> "[Jeff] Hawkins, who invented the Palm computer, said the killer app for
> smart phones will be better voice calling rather than wireless
> data applications."
>
> Jon, KE3Z
>
> ---
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> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

93. [ss] Re: Proposal

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 28 Jun 2000 22:23:42 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93561-2000.06.28-07.27.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Jun 28, 2000 at 06:48:48AM -0500, Gerry Creager N5JXS wrote:
> It looks more like a range than a hard rule, Hamish. Thus, we're saying
> a 10 MHz spreading domain, overall, with a 2 MHz chippping rate (which
> I'd prefer to see higher).

Hmmm. Is the 10 MHz bandwidth enough to support a 2 MHz chipping rate?

(Assuming DSSS, that seems to give fairly low processing gain.)

> Let's leave that as TBD (To Be Determined) and look at options. I agree
> that transverter is a preferred route for this, but while we need to
> pick an IF sometime, not on the first day of the project.

Fair enough.

DSSS, FHSS, or hybrid? Personally, I find FHSS to be a bit crude,
so I'd prefer DSSS. DSSS doesn't really lend itself to direct analog
modulation (I think), but I prefer voice over digital anyway.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

94. [ss] 2.4 GHz WaveLAN

From: Derek Lassen <kn6td@clubnet.net>
Date: Wed, 28 Jun 2000 05:30:01 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93563-2000.06.28-07.34.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Anybody here know where I should put the SMA on the RF pod of the PCMCIA
2.4MHz WaveLAN (old varity)?

73 de KN6TD

(s) Derek

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

95. [ss] R2k/H and R2K/M

From: Derek Lassen <kn6td@clubnet.net>
Date: Wed, 28 Jun 2000 05:29:49 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93562-2000.06.28-07.34.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Personalty, I'd use the 2K/H to link to my R2K/M in my Miata, then to the
closest R2K/R when I am far from home (home would be the closest until more
than 3 were built).

73 de KN6TD

(s) Derek

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

96. [ss] 915 MHz WaveLAN

From: Derek Lassen <kn6td@clubnet.net>
Date: Wed, 28 Jun 2000 05:33:54 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93564-2000.06.28-07.38.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Anybody know the keying characteristics of the long ISA 915 MHz WaveLAN?

I want to build a receive preamp / transmitt power amp.

I suppose that I could do RF sense, but somebody told me that the Voltage
on the cable changes with tx/rx and diversity.

Thanks.

73 de KN6TD

(s) Derek

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

97. [ss] Re: Proposal aka R2K

From: Derek Lassen <kn6td@clubnet.net>
Date: Wed, 28 Jun 2000 05:40:37 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93565-2000.06.28-07.45.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Since this was a little off the cuff, I was swaging a set of params.
Yes, 8 to one is too low a chipping rate. 10 MHz would be much better.

I don't think it would get coordinated in S Cal, so I think it should be a
fast hopper as well.

My thinking is fuzzy right now, but I think 1000 Hops a second should be good.
Again, the idea is to ignore the NBFM (except for receiver desense).

Later.
Really:>

73 de KN6TD
(s) Derek

At 10:23 PM 6/28/00 +1000, you wrote:
>On Wed, Jun 28, 2000 at 06:48:48AM -0500, Gerry Creager N5JXS wrote:
> > It looks more like a range than a hard rule, Hamish. Thus, we're saying
> > a 10 MHz spreading domain, overall, with a 2 MHz chippping rate (which
> > I'd prefer to see higher).
>
>Hmmm. Is the 10 MHz bandwidth enough to support a 2 MHz chipping rate?
>(Assuming DSSS, that seems to give fairly low processing gain.)
>
> > Let's leave that as TBD (To Be Determined) and look at options. I agree
> > that transverter is a preferred route for this, but while we need to
> > pick an IF sometime, not on the first day of the project.
>
>Fair enough.
>
>DSSS, FHSS, or hybrid? Personally, I find FHSS to be a bit crude,
>so I'd prefer DSSS. DSSS doesn't really lend itself to direct analog
>modulation (I think), but I prefer voice over digital anyway.
>
>
>
>Hamish
>--
>Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

98. [ss] RE: 915 MHz WaveLAN

From: adesjard@cme.com
Date: Wed, 28 Jun 2000 07:41:54 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93566-2000.06.28-07.46.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm not sure of the specs on this, but if you're interested in a pre-built
amp look at http://www.hyperlinktech.com , and check out their HA900SE amp,
500mw TX & 20db gain RX.

Alan DesJardins N5VXL
RF Network Engineer
Chicago Mercantile Exchange
MIS Systems
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Derek Lassen
Sent: Wednesday, June 28, 2000 7:34 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] 915 MHz WaveLAN

Anybody know the keying characteristics of the long ISA 915 MHz WaveLAN?

I want to build a receive preamp / transmitt power amp.

I suppose that I could do RF sense, but somebody told me that the Voltage
on the cable changes with tx/rx and diversity.

Thanks.

73 de KN6TD

(s) Derek

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---
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99. [ss] Re: Proposal aka R2K

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 28 Jun 2000 23:14:17 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93572-2000.06.28-08.18.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Jun 28, 2000 at 05:40:37AM -0700, Derek Lassen wrote:
> Since this was a little off the cuff, I was swaging a set of params.
> Yes, 8 to one is too low a chipping rate. 10 MHz would be much better.
>
> I don't think it would get coordinated in S Cal, so I think it should be a
> fast hopper as well.
>
> My thinking is fuzzy right now, but I think 1000 Hops a second should be good.
> Again, the idea is to ignore the NBFM (except for receiver desense).

I must be confused about the terminology somewhere -- I thought that
for FHSS, the chipping rate was the hops rate. So 1000 hops per second
means the chipping rate is 1kHz. You can still spread those hops
over 10 MHz though.

Most of my reading has been about DSSS. On DSSS, the bandwidth used is
proportional to the chipping rate and the information rate. (I think!)

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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100. [ss] RE: SS Unpopular

From: Ron Schroeder <rjs@bnl.gov>
Date: Wed, 28 Jun 2000 11:02:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93580-2000.06.28-10.06.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

<snip>
>I see two ways this can be achieved. The voice repeater could be digital,
>as you state. This is particularly suitable for inter-repeater links and
>voice networks. The alternate approach (which may be interesting for 'SS
>repeaters') is to apply SS techniques to a conventional analog signal.
<snip>

I am very interested in SS voice. I had a FHSS voice repeater on a number
of years ago. I would love to get back into using SS mobile.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
631 344-4561 Day
631 286-5677 Nite
*note change of area code to 631 from 516

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101. [ss] Re: Metricom

From: Brett Glass <brett@lariat.org>
Date: Wed, 28 Jun 2000 11:45:52 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93674-2000.06.28-15.07.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 05:22 AM 6/27/2000, Kenneth H. Sinclair wrote:

>Yeah, but they are hoppers, and other hoppers can contend with them
>somewhat successfully.

Not very successfully. The "swarming" problem causes severe interference
for other users of the band.

> Do you have any info about their emitted spectrum?

Metricom tells me that they are type-approved, and hence each
transmitter presumably stays within the constraints of Part 15.
The problem is that they deploy large NUMBERS of transmitters, and
hence radiate an aggregate power far above the legal limit for a
single transmitter.

While these transmitters' hopping patterns can collide with
one another, the units are physically spaced such that they are
less likely to interfere with one another than with a third party.

Metricom has patents on hopping sequence coordination, though Part
15 doesn't allow it. I have long wondered if there is de facto
sequence coordination due to the algorithms used by the Metricom
units to avoid interference, but haven't performed empirical tests.

I have, however, personally observed the effect of the "swarming"
phenomenon on DSSS equipment (whose emissions appear to the hoppers
as noise). They all turn up the juice and can make DSSS transmission
difficult if not impossible. It's sometimes possible to operate
point-to-point links in the same band with directional antennas, but
point-to-multipoint outdoor LANs are pretty much out of the question.

--Brett

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102. [ss] Re: Proposal

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:08:16 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93708-2000.06.28-18.12.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> > I'm gong to call it R2K (Radio 2000).
> > R2K/R is q Repeater, R2K/H is a Handheld, R2K/M is a mobile.
> > Use your imagination for where a R2K/O is. :>
>
> Well, it's a grand plan. I like it though.

Certainly worth a look. A little more "ad hoc" than my ideas, which could be good in an amateur context

>
> > It should work on 440 to 450 MHz (all of it) :>
> > It should refuse to go below 440 or above 450.
>
> For the US, yes. Here in Australia we have all of 420-450; 432-440
> is normal voice stuff (repeaters, simplex, data and weak signal).
> 440-450 is ATV. I think 420-430 is also reserved for ATV, but is
> less used than 440-450. So 420 would be better for us.

I agree, 420-430 would be the best band, as this is the lesser used ATV channel, though there's no reason why some systems couldn't use 440-450, if local conditions required.

>
> > A transverter for baseband vs RF conversion.
>
> Yep. I think the modem itself should work on a 28 MHz IF or so
> (just as the Grapes 56K modem does --- www.da4dsy.net for info).
> Then a transverter can be used to select the band of interest.

Where would the chipping occur? I'm not entirely comfortable with the idea of a 10 MHz wide signal centered at 28 MHz. :-)

>
> I estimate the batteries on the hand held model will last about
> five minutes with all the hardware you want to put in it :-)

Hmm, low power CMOS? Well, I'll be testing out the handheld model when it comes out. ;-)

You are currently subscribed to ss as: lyris.ss@tapr.org
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103. [ss] Re: Proposal aka R2K

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:23:19 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93726-2000.06.28-20.13.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Since this was a little off the cuff, I was swaging a set of params.
> Yes, 8 to one is too low a chipping rate. 10 MHz would be much better.
>
> I don't think it would get coordinated in S Cal, so I think
> it should be a
> fast hopper as well.

Well, I guess 440-450 is your repeater/NBFM voice band anyway... Down here, the main conflicts are going to be ATV and the odd point to point repeater link (which shouldn't have any real effect in most cases, because of their ptp nature).

>
> My thinking is fuzzy right now, but I think 1000 Hops a
> second should be good.
> Again, the idea is to ignore the NBFM (except for receiver desense).

As I said, not an issue here. :-) Perhaps we need to draw up a table of options, constraints and the pros and cons of the options.

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104. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:11:14 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93823-2000.06.29-04.14.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Yep. But I'd prefer to do voice as digital over SS, rather than
> modulating directly with voice. Then you can just replace the
> codec/ADC
> and use it for data as well.

Digital is more flexible, that's for sure. But hey, if we get the chance,
why not experiment? :)

>
> Wouldn't have to be VoIP -- I think that might be overkill initially.

Depends what you want to do. Sure, for "end user" repeaters, VoIP is
overkill, and adds overhead to the mobile units, but it is a readily
available and _flexible_ technology that would do well on backbone
inter-repeater links.

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105. [ss] Re: Proposal

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:17:10 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93824-2000.06.29-04.15.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> DSSS, FHSS, or hybrid? Personally, I find FHSS to be a bit crude,
> so I'd prefer DSSS. DSSS doesn't really lend itself to direct analog
> modulation (I think), but I prefer voice over digital anyway.

My personal preference would be for DSSS voice over digital (at this stage,
non IP, KISS applies here :)).

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106. [ss] Re: Proposal aka R2K

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:26:53 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93828-2000.06.29-04.16.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I must be confused about the terminology somewhere -- I thought that
> for FHSS, the chipping rate was the hops rate. So 1000 hops per second
> means the chipping rate is 1kHz. You can still spread those hops
> over 10 MHz though.

My understanding was that "chipping rate" wasn't really relevant to FH
(instead, hopping rate is more important here, for obvious reasons!).

>
> Most of my reading has been about DSSS. On DSSS, the bandwidth used is
> proportional to the chipping rate and the information rate. (I think!)

AFAIK, that's the case for DSSS.   In FHSS, the bandwidth depends mainly on
the range of frequencies the hops cover (plus a little for the hop rate and
pre-hop "baseband"). Kind of like the signal being FM'd by a tandom signal
added to the baseband, with the peak deviation being 1/2 of the difference
between the lowest and highest hop frequency.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

107. [ss] RE: Proposal

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 10:14:42 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93827-2000.06.29-04.16.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> OK here is a forming idea:
>
> I'm gong to call it R2K (Radio 2000).
> R2K/R is q Repeater, R2K/H is a Handheld, R2K/M is a mobile.
> Use your imagination for where a R2K/O is. :>

Heheheh. :-)

> It should work on 440 to 450 MHz (all of it) :>
> It should refuse to go below 440 or above 450.

It should be configurable for the band of interest. s otherwise noted,
420-430 is more preferable down here.

> It should have a 256KB bps hybrid DS/FH SS Modem, maybe 2 MHz
> chipping rate.
> DS for gain, FH for loss (of hassles to land mobile).

Maybe have the FH an optional part of the spec? I doubt it'd be needed
here.

> I think the Zilog / Stel part (aka Z2000) would be good for this.
> However I am beginning to think the prizm chipset might be better.
>
> A transverter for baseband vs RF conversion.

Yes, a transverter would make the system more flexible, and easier to bulld
into multiband equipment. Basically, you're creating a conventional SSB
transceiver, as far as the frequency generation goes. Just that the IF is
SS, rather than SSB. :)

> Peak power:
> For a R2K/H: +35 dBm,

OK.

> For a R2K/M: +45 dBm,

OK,

> For a R2K/R:+55 dBm,

Do we need 300W for the repeater? I wouldn't think so if it acts as a
conventional voice repeater and relays one SS signal at a time. OTOH, if it
is designed to handle multiple QSOs (using CDMA techniques), then the extra
power would be needed..

> For a R2K/O: +70 dBM.

Might be a slight legal problem there! ;-)
>
> Automatic power negotiation - less is better.

Especially for handhelds! A "must have" feature, in the long run. Also
good for the "RF paranoid" out there in the community. Maybe they'd accept
the repeater up the road when they realise it means the ham _next door_ is
only transmitting milliwatts to get into it! :-)

> Every unit is a router. Every ham is an island. But he is
> part of an island
> chain.

Good idea, if relaying can be effectively done by normal hams, when they're
active, it would create a useable system (hmm, starting to sound like a CDMA
phone network - maybe this is for the 2nd or 3rd revision ;)).

> There would need to a protocol (and matching servers)
> developed, like ARP,
> but which says "Ok, who's nearby who knows where we are?".
> Like a Time
> Server, but returning Latitude / Longitude / Altitude.
> (What should bigmamma.ampr.org return? Earth's current
> sideral coordinates.

Well, perhaps we can borrow a few ideas from things like APRS here.

> We out to be able to get a R2K/O put aboard the ISS.

Hmm, might be a power budget problem. ;-)

The idea's worth considering, and seems a few others agree as well. How about start with a basic system which replaces the current NBFM components with SS ones. I.e.

We build a number of stations, ans a repeater or two, and run it in much the same way as we do normal FM repeaters (perhaps with data as well). later, the more "network aware" features can be added, as well as CDMA channel access, and the like. Hopefully Moore's Law and mass production of the component parts (one would assume similar components are required for mass market devices) would make the enhancements cheaper in the future, and they'll probably be easier as better devices become available off the shelf.

Hey, while we're at it, maybe we need an SS bird to play with. Would need to use 1.2 GHz and up to get the bandwidth... Mybe down the track for that too. :)

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108. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:28:21 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93826-2000.06.29-04.15.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I am very interested in SS voice. I had a FHSS voice
> repeater on a number
> of years ago. I would love to get back into using SS mobile.

How did your FHSS repeater go? And can you give any reports for the benefit of the group? ny previous experience would be beneficial.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

109. [ss] RE: 915 MHz WaveLAN

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Thu, 29 Jun 2000 09:19:31 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93829-2000.06.29-04.16.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Anybody know the keying characteristics of the long ISA 915
> MHz WaveLAN?
>
> I want to build a receive preamp / transmitt power amp.

If anyone does find out this sort of info for _any_ of the wireless LAN cards, please let me know, there are people down here interested. Similarly, detailed info on any of the existing power amps would be handy too.

> I suppose that I could do RF sense, but somebody told me that
> the Voltage
> on the cable changes with tx/rx and diversity.

Also potential speed problems, a direct switching signal would be much neater.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

110. [ss] RE: SS Unpopular

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Thu, 29 Jun 2000 19:34:48 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93831-2000.06.29-04.38.51--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

On Thu, Jun 29, 2000 at 09:11:14AM +1000, Tony Langdon wrote:
> Depends what you want to do. Sure, for "end user" repeaters, VoIP is
> overkill, and adds overhead to the mobile units, but it is a readily
> available and _flexible_ technology that would do well on backbone
> inter-repeater links.

Sounds good. Inter-repeater links should be purely digital
(carrying any traffic presented to them), including voice.
Hmm, it's beginning to sound like an IP network already.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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111. [ss] re R2K

From: Derek Lassen <kn6td@clubnet.net>
Date: Thu, 29 Jun 2000 03:27:04 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93834-2000.06.29-05.32.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Cool.
Ideas percolating!
Excellent....

re Power:
Yea, I know these numbers are pretty high, but remember that the spectrum /
power product is still pretty low.

+70 dBm s/b +60 dBm (hey, I was sleepy) (still big, but it'll have a lot of
path loss).

re Chipping vs Hopping:
If possible, we should chip the PRN bit stream at 10 MHz and hop the
carrier at 1 kHz.
The PRN generator will have to be changeable.
The Hop sequence will have to be changeable too (to avoid those ATVers).

Later. Gotta get some sleep. Its 3:27 AM !!!
73 de KN6TD
(s) Derek

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

112. [ss] Re: re R2K

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Thu, 29 Jun 2000 22:42:10 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93840-2000.06.29-07.46.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Jun 29, 2000 at 03:27:04AM -0700, Derek Lassen wrote:
> +70 dBm s/b +60 dBm (hey, I was sleepy) (still big, but it'll have a lot of
> path loss).

Correct me if I'm wrong, but +60dBm is 1kW. Good luck getting 1kW on
70cm or higher easily.

> re Chipping vs Hopping:
> If possible, we should chip the PRN bit stream at 10 MHz and hop the
> carrier at 1 kHz.
> The PRN generator will have to be changeable.
> The Hop sequence will have to be changeable too (to avoid those ATVers).

Hmmm, hybrid huh?

Intersil's PRISM 1 chipset looks quite interesting; I read the datasheet

for their baseband DSSS processor last night. Programmable PN sequences
of up to 12 bits (from memory).

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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113. [ss] Questions:

From: Marshall.Alphonso@intelsat.int
Date: Thu, 29 Jun 2000 09:01:47 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: antoine.naaman@intelsat.int
Message-ID: <LYR6751-93841-2000.06.29-08.06.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,
        Would anyone be able to tell me the correlation between "actual
transmitted power in term of noise density within a particular frequency" vs
spread? Assuming an arbitrary RF waveform?

Thanks,

Marshall A. Alphonso

Earth Stations Division
INTELSAT
Tel: (202)-944-7825
Fax: (202)-944-7121
Email: malphons@ecn.purdue.edu <mailto:malphons@ecn.purdue.edu>
           Marshall.Alphonso@INTELSAT.int
<mailto:Marshall.Alphonso@INTELSAT.int>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

114. [ss] RE: SS Unpopular

From: Ron Schroeder <rjs@bnl.gov>
Date: Thu, 29 Jun 2000 11:03:21 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93874-2000.06.29-10.07.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:28 AM 6/29/00 +1000, you wrote:
>> I am very interested in SS voice. I had a FHSS voice
>> repeater on a number
>> of years ago. I would love to get back into using SS mobile.
>
>How did your FHSS repeater go? And can you give any reports for the benefit
>of the group? ny previous experience would be beneficial.
>

The repeater was a modified GE master II with a home brew synth. to replace
the ICOMs. The mobiles were Icom 4ATs that hopped thru channels on a ROM
thet replaced the thumbwheel switch. The loop was modified for faster
lock-up. I did about 16 hops per second and the audio did have a bit of a
buzz. Syncronization was from a very accurate hopping clock that was
slipped into sync on first key up and only needed slight tweeking to stay
in sync. It would actually stay in sync for many minutes even free
running. The tx/rx offset was 5.0 MHz and the hopping range was about .75
MHz. The first person who transmitted had to hold down the PTT for about 5
seconds for the repeater to sync and the other mobiles to catch up.

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
631 344-4561 Day

631 286-5677 Nite
*note change of area code to 631 from 516

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

115. [ss] Re: ss digest: June 25, 2000

From: "Paul Van Wie" <w8ox@sprynet.com>
Date: Thu, 29 Jun 2000 14:42:14
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93916-2000.06.29-14.46.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Lyle,

I doubt you remember me, but I got into packet in 1984/5 when I built your first TNC. Len VE3FJB, Wes K7PYK and I used to drive down to Tucson every November for the big packet meeting. I have chatted with you every now and then at various ham fests. I work at Ft Huachuca with Mark McFadden. There are several hams here interested in playing with DSSS. Is there a source of the older (and cheaper) WLAN cards using DSSS? I have recently re subscribed to the reflector after being off for several years. At this time, we are not interested in building a system from scratch. If we can get hold of some cards out of a wireless LAN, we will be able to play with them and gain some experience before jumping to the next level. . I went from Packet to Pactor to Clover and used to chat with (gee forget his first name) Ray (?) Pettit up in WA now and then on Clover. Was very sad to hear he passed away.

My home e mail is w8ox@sprynet.com and you can also send any reply to this work address.

Thanks for the help.

Paul

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

116. [ss] Available for research

From: adesjard@cme.com
Date: Thu, 29 Jun 2000 14:58:03 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93921-2000.06.29-15.03.10--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

All,

I have a few Proxim 900 Mhz RDA-300 FH OEM modules that I can send to anyone interested in doing some work with them. There are no docs, nor have I been sucessfull in getting any. Interested? Let me know.

Alan N5VXL

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Paul Van Wie
Sent: Thursday, June 29, 2000 9:42 AM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: ss digest: June 25, 2000

Hello Lyle,

I doubt you remember me, but I got into packet in 1984/5 when I built your first TNC. Len VE3FJB, Wes K7PYK and I used to drive down to Tucson every November for the big packet meeting. I have chatted with you every now and then at various ham fests. I work at Ft Huachuca with Mark McFadden. There are several hams here interested in playing with DSSS. Is there a source of the older (and cheaper) WLAN cards using DSSS? I have recently re subscribed to the reflector after being off for several years. At this time, we are not interested in building a system from scratch. If we can get hold of some cards out of a wireless LAN, we will be able to play with them and gain some experience before jumping to the next level. . I went

from Packet to Pactor to Clover and used to chat with (gee forget his first
name) Ray (?) Pettit up in WA now and then on Clover. Was very sad to
hear he passed away.

My home e mail is w8ox@sprynet.com and you can also send any reply to this
work address.

Thanks for the help.

Paul

You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

117. [ss] Re: 915 MHz WaveLAN

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Thu, 29 Jun 2000 16:03:40 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93941-2000.06.29-16.07.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, 28 Jun 2000, Derek Lassen <kn6td@clubnet.net> wrote:
>Anybody know the keying characteristics of the long ISA 915 MHz WaveLAN?
>
>I want to build a receive preamp / transmitt power amp.
>
>I suppose that I could do RF sense, but somebody told me that the Voltage
>on the cable changes with tx/rx and diversity.
>
>Thanks.
>
>73 de KN6TD

My 915 MHz WaveLAN's appear to use:
http://www-us.semiconductors.com/pip/BLU86

Pin 11 of the Daedalus ASIC appears to be +5 VDC on
receive, 0 VDC on transmit.

For more info see:
http://www.dct.com/~multiplx/wireless/appendixE.html

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

118. [ss] Info on this gear

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Thu, 29 Jun 2000 17:23:07 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93947-2000.06.29-16.31.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have some Aironet ARLAN 025-1A and 025-1AB
devices. These things appear to be some sort of OEM
device. Calls to Aironet bring me nothing, they tell me
to call Telxon who used to own Aironet before the sold
it to Cisco... Now no one can tell me where to get docs
on these devices.

I know these devices are 2.4ghz, and suspect that they
are DSSS devices, since so far all the Aironet devices
that are FH have that indicated somewhere on the label.

If anyone can tell me anything about them I would be
most appreciative.

By way the outside world connections are 12v DC and a
DB 25 female connector.

Chuck Hast
Telecomms Consultant, Utility Partners.
Office number: 813.282.8828 x 1175
C-phone number: 813.765.6743
E-mail: wchast@utilpart.com
SMS < 150 characters: 8137656743@mobile.att.net

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

119. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Fri, 30 Jun 2000 09:12:39 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93968-2000.06.29-18.16.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> > Depends what you want to do. Sure, for "end user"
> repeaters, VoIP is
> > overkill, and adds overhead to the mobile units, but it is a readily
> > available and _flexible_ technology that would do well on backbone
> > inter-repeater links.
>
> Sounds good. Inter-repeater links should be purely digital
> (carrying any traffic presented to them), including voice.
> Hmm, it's beginning to sound like an IP network already.

I can see two stages of development here. The end user access will be some sort of voice/data unit running SS (unspecified, could be DS, FH or a combination of both), using a lightweight protocol to provide data and voice channels through the repeater.

The inter-repeater links ("repeater" being either the new SS devices or conventional FM repeaters would be somewhat more sophisticated. Running IP and VoIP technology offers a high degree of flexibility here using a lot of "off the shelf" technology. It may also be possible to use various techniques (OCARs, translators, regenerators, etc) to allow the actual IP routing hardware and VoIP gateway (e.g. a PC) to be located at a more accessible place, such as club rooms or a ham's house, and simple equipment on the mountaintop for reliability. Perhaps for SS repeaters, these "engineering" links can be done on the repeater frequencies using a different code sequence to general ham traffic.

Just brainstorming here. Haven't done any real investigation as to the practicality of this idea.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

120. [ss] Re: Available for research

From: Derek Lassen <kn6td@clubnet.net>
Date: Thu, 29 Jun 2000 18:10:57 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93994-2000.06.29-20.20.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think these are the same as the Proxim RDA100. I have some of these and the doc (including pinout).

The radio pod is a set of registers, address bus, data bus, strobes, etc. Very easy to talk to.

256k bps. I ca't remember much about tthe chiping process / rate.

Let me know if you need more.

(s) Derek
At 02:58 PM 6/29/00 -0500, you wrote:
>All,
>
>   I have a few Proxim 900 Mhz RDA-300 FH OEM modules that I can send to
>anyone interested in doing some work with them. There are no docs, nor have
>I been sucessfull in getting any. Interested? Let me know.
>
>Alan N5VXL

>
>
>
>-----Original Message-----
>From: bounce-ss-12965@lists.tapr.org
>[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Paul Van Wie
>Sent: Thursday, June 29, 2000 9:42 AM
>To: TAPR Spread Spectrum Special Interest Group
>Subject: [ss] Re: ss digest: June 25, 2000
>
>
>Hello Lyle,
>
>I doubt you remember me, but I got into packet in 1984/5 when I built your
>first TNC. Len VE3FJB, Wes K7PYK and I used to drive down to Tucson every
>November for the big packet meeting. I have chatted with you every now and
>then at various ham fests. I work at Ft Huachuca with Mark McFadden.
>There are several hams here interested in playing with DSSS. Is there a
>source of the older (and cheaper) WLAN cards using DSSS? I have recently
>re subscribed to the reflector after being off for several years. At this
>time, we are not interested in building a system from scratch. If we can
>get hold of some cards out of a wireless LAN, we will be able to play with
>them and gain some experience before jumping to the next level. . I went
>from Packet to Pactor to Clover and used to chat with (gee forget his first
>name) Ray (?) Pettit up in WA now and then on Clover. Was very sad to
>hear he passed away.
>
>My home e mail is w8ox@sprynet.com and you can also send any reply to this
>work address.
>
>Thanks for the help.
>
>Paul
>
>---
>You are currently subscribed to ss as: adesjard@cme.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

121. [ss] Re: 915 MHz WaveLAN

From: Derek Lassen <kn6td@clubnet.net>
Date: Thu, 29 Jun 2000 18:12:16 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-93995-2000.06.29-20.20.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks.
This will be most useful.

At 04:03 PM 6/29/00 -0500, you wrote:
>On Wed, 28 Jun 2000, Derek Lassen <kn6td@clubnet.net> wrote:
> >Anybody know the keying characteristics of the long ISA 915 MHz WaveLAN?
> >
> >I want to build a receive preamp / transmitt power amp.
> >
> >I suppose that I could do RF sense, but somebody told me that the Voltage
> >on the cable changes with tx/rx and diversity.
> >
> >Thanks.
> >
> >73 de KN6TD
>
>My 915 MHz WaveLAN's appear to use:
>http://www-us.semiconductors.com/pip/BLU86
>
>Pin 11 of the Daedalus ASIC appears to be +5 VDC on
>receive, 0 VDC on transmit.
>

>For more info see:
>http://www.dct.com/~multiplx/wireless/appendixE.html
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

122. [ss] RE: re R2K

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Fri, 30 Jun 2000 09:17:52 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94066-2000.06.30-04.08.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Cool.
> Ideas percolating!
> Excellent....

:-)

> re Power:
> Yea, I know these numbers are pretty high, but remember that
> the spectrum /
> power product is still pretty low.

True, but I find repeaters with large differences in input and output performance frustrating, so unless multiple simultaneous transmissions are involved (which would need a lot of headroom), I'd keep it to under 100W...

>
> +70 dBm s/b +60 dBm (hey, I was sleepy) (still big, but it'll
> have a lot of
> path loss).

Hehehehe. :-)

>
> re Chipping vs Hopping:
> If possible, we should chip the PRN bit stream at 10 MHz and hop the
> carrier at 1 kHz.
> The PRN generator will have to be changeable.
> The Hop sequence will have to be changeable too (to avoid
> those ATVers).

Like avoid the spectral clumps every line frequency interval (which will be different for you than it is for us, as we use different TV standards here - PAL B/G vs NTSC-M).

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

123. [ss] Re: re R2K

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Fri, 30 Jun 2000 09:20:12 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94116-2000.06.30-08.08.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> On Thu, Jun 29, 2000 at 03:27:04AM -0700, Derek Lassen wrote:
> > +70 dBm s/b +60 dBm (hey, I was sleepy) (still big, but
> it'll have a lot of
> > path loss).
>
> Correct me if I'm wrong, but +60dBm is 1kW. Good luck getting 1kW on
> 70cm or higher easily.

That's what I thought. :-)

> > The PRN generator will have to be changeable.
> > The Hop sequence will have to be changeable too (to avoid
> those ATVers).

>
> Hmmm, hybrid huh?

Looks like that's the idea...

>
> Intersil's PRISM 1 chipset looks quite interesting; I read
> the datasheet
> for their baseband DSSS processor last night. Programmable PN
> sequences
> of up to 12 bits (from memory).

Interesting. ctually, there should be a few useful chipsets out there, due
to the LIPD market (known in the US as Part 15).

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

124. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Fri, 30 Jun 2000 09:34:36 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94117-2000.06.30-08.08.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> The repeater was a modified GE master II with a home brew
> synth. to replace
> the ICOMs. The mobiles were Icom 4ATs that hopped thru
> channels on a ROM
> thet replaced the thumbwheel switch. The loop was modified for faster
> lock-up. I did about 16 hops per second and the audio did
> have a bit of a
> buzz. Syncronization was from a very accurate hopping clock that was
> slipped into sync on first key up and only needed slight
> tweeking to stay
> in sync. It would actually stay in sync for many minutes even free
> running. The tx/rx offset was 5.0 MHz and the hopping range
> was about .75
> MHz. The first person who transmitted had to hold down the
> PTT for about 5
> seconds for the repeater to sync and the other mobiles to catch up.

Interesting idea. :-) Did it show any of the advantages of SS? (I suspect
it was rather tolerant of the local gasbags on simplex :)).

Would have been fun to play with. :-)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

125. [ss] RE: SS Unpopular

From: Ron Schroeder <rjs@bnl.gov>
Date: Fri, 30 Jun 2000 13:36:46 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94149-2000.06.30-12.40.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>Interesting idea. :-) Did it show any of the advantages of SS? (I suspect
>it was rather tolerant of the local gasbags on simplex :)).
>
>Would have been fun to play with. :-)
>

I intentionally ran it with a couple of repeater pairs out of the 32 or 64
hopping channels a few times. The HTs would not open the repeaters and
when the repeaters were on, it only very slightly degraded the hoppers.

Ron
WD8CDH

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com

631 344-4561 Day
631 286-5677 Nite
*note change of area code to 631 from 516

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

July 2000

Original source file: ss.0007
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0007

1. [ss] New Radio project needs radioengengeers

From: "M.B" <sm1ugt@hotmail.com>
Date: Sat, 1 Jul 2000 20:45:12 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94345-2000.07.01-13.52.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is perhaps not a message that shall be here - but I am seeking contact wih a radio engengeer.
  Would like to ask for some help with a Digital radio design for a 802.11 project. You get a specification
what needs to be done. You serve yourself with the instrumentation to complete it. The design process must be fast - in 4 months or less there have to be a product. More information futher if you write to:

In any cases Write me To Marcel.Bos@abc.se
Or ICQ: 78210823

2. [ss] RE: SS Unpopular

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Mon, 3 Jul 2000 08:34:31 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94464-2000.07.02-17.38.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I intentionally ran it with a couple of repeater pairs out of
> the 32 or 64
> hopping channels a few times. The HTs would not open the
> repeaters and
> when the repeaters were on, it only very slightly degraded
> the hoppers.

Interesting results. :)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] (fwd) Spartan II availability and pricing

From: hamish@cloud.net.au (Hamish Moffatt VK3SB)
Date: Tue, 04 Jul 2000 22:54:14 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94694-2000.07.04-07.58.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Xilinx Spartan-II prices, interesting reading. Confirms what Lyle
has been telling me all along! Thanks Lyle.

Hamish

-- forwarded message --
Path: news1.eburwd1.vic.optushome.com.au!newshub1.rdc1.nsw.optushome.com.au!newshub1.kdd.nap.home.ne.jp!news.home.ne.jp!newsfeed.gamma.ru!Gamma.RU!newsfeed.stanford.edu!info1.fnal.gov!overload.lbl.gov!ldoolitt
From: ldoolitt@recycle (Larry Doolittle)
Newsgroups: comp.arch.fpga
Subject: Spartan II availability and pricing
Date: 17 May 2000 20:00:13 GMT
Organization: Lawrence Berkeley National Laboratory
Lines: 28
Message-ID: <8futod$7h4@overload.lbl.gov>
NNTP-Posting-Host: recycle.lbl.gov
X-Newsreader: TIN [version 1.2 PL2]
Xref: newshub1.rdc1.nsw.optushome.com.au comp.arch.fpga:3721

I'm resurrecting an old thread, because Avnet and Insight
now have reasonable prices listed for the Spartan-II chips.

The two distributors agree to the penny wherever they overlap,
so I assume these are Xilinx sanctioned prices in US$ for
small quantities as of May 16, 2000:

	TQ144C	PQ208C	FG256C	FG456C
XC2S50-5	$12.85	$14.75	$16.65	
XC2S100-5	$17.60	$19.55	$24.65	$31.00

XC2S150-5 $21.60 $27.00 $35.10

These are a _lot_ lower than a month ago, even lower than
I predicted. I thought they would be more sensitive to their
Virtex customers (Virtex prices haven't dropped, an XCV100
is still generally above $100). Maybe they think most Virtex
customers have become addicted to the larger sizes available
in that line.

The remaining question is availability. Those distributors
don't claim stock ("Please call"). Does anyone here know
the real scoop? If not, I'll try to get something out of
Insight.

I have updated http://recycle.lbl.gov/xc2search.html with this
info.

      - Larry Doolittle   <LRDoolittle@lbl.gov>
-- end of forwarded message --

--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: New Radio project needs radioengengeers

From: Fredrik Öberg <fredrik.oberg@telia.com>
Date: Tue, 04 Jul 2000 15:57:02 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94699-2000.07.04-09.01.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hej
Har du mera information om 802.11 projektet ?
Hur har det gått med gunplexer radio länkarna ?
Har nu kört min längk ett antal månader på 10mbit på 10ghz.

Mvh Fredrik Öberg SM2XBN

"M.B" wrote:

>   This is perhaps not a message that shall be here - but I am seeking contact wih a radio engengeer.
  Would like to ask for some help with a Digital radio design for a 802.11 project. You get a
> specificationwhat needs to be done. You serve yourself with the instrumentation to complete it. The
design processmust be fast - in 4 months or less there have to be a product. More information
> futher if you write to: In any cases Write me To Marcel.Bos@abc.seOr ICQ: 78210823

5. [ss] Re: (fwd) Spartan II availability and pricing

From: "PAUL VAN WIE" <w8ox@sprynet.com>
Date: Tue, 4 Jul 2000 10:15:57 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94728-2000.07.04-12.19.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hamish,

I am just getting into SS, and am not familiar with all these chips. I
wonder if you would please tell me what the function of these chips are? I
am trying to hunt down some wireless LAN ethernet boards in the
Phoeniz/Tucson area but not having any success to date.

Thanks,
Paul Van Wie
W8OX

----- Original Message -----
From: Hamish Moffatt VK3SB <hamish@cloud.net.au>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Sent: Tuesday, July 04, 2000 5:54 AM
Subject: [ss] (fwd) Spartan II availability and pricing

> Xilinx Spartan-II prices, interesting reading. Confirms what Lyle
> has been telling me all along! Thanks Lyle.
>

> Hamish
>
> -- forwarded message --
> Path:
news1.eburwd1.vic.optushome.com.au!newshub1.rdc1.nsw.optushome.com.au!newshu
b1.kdd.nap.home.ne.jp!news.home.ne.jp!newsfeed.gamma.ru!Gamma.RU!newsfeed.st
anford.edu!info1.fnal.gov!overload.lbl.gov!ldoolitt
> From: ldoolitt@recycle (Larry Doolittle)
> Newsgroups: comp.arch.fpga
> Subject: Spartan II availability and pricing
> Date: 17 May 2000 20:00:13 GMT
> Organization: Lawrence Berkeley National Laboratory
> Lines: 28
> Message-ID: <8futod$7h4@overload.lbl.gov>
> NNTP-Posting-Host: recycle.lbl.gov
> X-Newsreader: TIN [version 1.2 PL2]
> Xref: newshub1.rdc1.nsw.optushome.com.au comp.arch.fpga:3721
>
> I'm resurrecting an old thread, because Avnet and Insight
> now have reasonable prices listed for the Spartan-II chips.
>
> The two distributors agree to the penny wherever they overlap,
> so I assume these are Xilinx sanctioned prices in US$ for
> small quantities as of May 16, 2000:
>
>   TQ144C   PQ208C   FG256C   FG456C
> XC2S50-5 $12.85 $14.75 $16.65
> XC2S100-5 $17.60 $19.55 $24.65 $31.00
> XC2S150-5 $21.60 $27.00 $35.10
>
> These are a _lot_ lower than a month ago, even lower than
> I predicted. I thought they would be more sensitive to their
> Virtex customers (Virtex prices haven't dropped, an XCV100
> is still generally above $100). Maybe they think most Virtex
> customers have become addicted to the larger sizes available
> in that line.
>
> The remaining question is availability. Those distributors
> don't claim stock ("Please call"). Does anyone here know
> the real scoop? If not, I'll try to get something out of
> Insight.
>
> I have updated http://recycle.lbl.gov/xc2search.html with this
> info.
>
>   - Larry Doolittle   <LRDoolittle@lbl.gov>
> -- end of forwarded message --
>
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>
>
> ---
> You are currently subscribed to ss as: w8ox@sprynet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: (fwd) Spartan II availability and pricing

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 5 Jul 2000 08:21:41 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94779-2000.07.04-17.26.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Jul 04, 2000 at 10:15:57AM -0700, PAUL VAN WIE wrote:
> I am just getting into SS, and am not familiar with all these chips. I
> wonder if you would please tell me what the function of these chips are? I
> am trying to hunt down some wireless LAN ethernet boards in the
> Phoeniz/Tucson area but not having any success to date.

Well, the devices I posted about are FPGAs, which stands
for field programmable gate array. In short, they are an array of
logic gates which you can program to do anything you want.

The biggest manufacturers of FPGAs are Xilinx and Altera.

I'm only familar with the Xilinx parts.

In a Xilinx FPGA, there is a regular array of rows and columns of
things called "configurable logic blocks" (CLBs). Each CLB contains
a couple of flip flops and a couple of look up tables (LUTs).
The LUTs are effectively logic gates. (And they can be used as RAM
or ROM on some chips.) In between the CLBs are nets connecting CLBs
together.

When designing for an FPGA, you draw your design using a schematic
editor. (You can also enter it using a hardware description language
such as VHDL, Verilog or AHDL, but that's another story.) Once you
have entered the design, you use tools supplied by the chip vendor
to "place and route" the design onto the chip. Basically, the software
works out where each logic gate in your design should be placed on
the chip, then works out how to connect the logic gates together,
using the fixed resources inside the chip.

The Xilinx FPGAs are reprogrammable and in fact must be programmed
every time you power them on. They do not contain any flash memory
to store your design.

Altera have a similar design with LEs (logic elements) instead of
CLBs, etc. The contents of a Xilinx CLB change between different
chip families too; the older 4000 and Spartan families had two flip
flops per CLB, but a Virtex or Spartan-II has 4.

The web site http://www.optimagic.com/ may have some more information.

Cheers,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: (fwd) Spartan II availability and pricing

From: Dave <depagnier@uswest.net>
Date: Tue, 04 Jul 2000 20:52:10 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94801-2000.07.04-21.54.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

So what part of the radio in particular would you use this for?

--Dave
K0QE

Hamish Moffatt wrote:

> On Tue, Jul 04, 2000 at 10:15:57AM -0700, PAUL VAN WIE wrote:
> > I am just getting into SS, and am not familiar with all these chips. I
> > wonder if you would please tell me what the function of these chips are? I
> > am trying to hunt down some wireless LAN ethernet boards in the
> > Phoeniz/Tucson area but not having any success to date.
>
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> logic gates which you can program to do anything you want.
>
> The biggest manufacturers of FPGAs are Xilinx and Altera.
> I'm only familar with the Xilinx parts.
>
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> a couple of flip flops and a couple of look up tables (LUTs).
> The LUTs are effectively logic gates. (And they can be used as RAM
> or ROM on some chips.) In between the CLBs are nets connecting CLBs
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>
> When designing for an FPGA, you draw your design using a schematic
> editor. (You can also enter it using a hardware description language
> such as VHDL, Verilog or AHDL, but that's another story.) Once you
> have entered the design, you use tools supplied by the chip vendor
> to "place and route" the design onto the chip. Basically, the software

> works out where each logic gate in your design should be placed on
> the chip, then works out how to connect the logic gates together,
> using the fixed resources inside the chip.
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> The Xilinx FPGAs are reprogrammable and in fact must be programmed
> every time you power them on. They do not contain any flash memory
> to store your design.
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> Altera have a similar design with LEs (logic elements) instead of
> CLBs, etc. The contents of a Xilinx CLB change between different
> chip families too; the older 4000 and Spartan families had two flip
> flops per CLB, but a Virtex or Spartan-II has 4.
>
> The web site http://www.optimagic.com/ may have some more information.
>
> Cheers,
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>
>
> ---
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> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] Re: (fwd) Spartan II availability and pricing

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 4 Jul 2000 22:15:55 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94820-2000.07.05-00.20.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

>So what part of the radio in particular would you use this for?

The original thread about this was how to do fast DSP. An FPGA can do
limited DSP functions at really high speeds. And the newer high-density,
low cost FPGAs may be able to do enough, fast enough, at low enough cost to
be interresting.

Lyle

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Re: (fwd) Spartan II availability and pricing

From: Dave <depagnier@uswest.net>
Date: Wed, 05 Jul 2000 00:19:47 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94830-2000.07.05-01.22.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ok great Lyle thanks for pulling this back into context, but DSP to me means
shift, multiply, accumulate. My question is: what part of the radio is the FPGA
useful for? What DSP functions are we talking about here? Of course FIR or IIR
filters are doable with DSP but what else are we talking here?

-- Dave

Lyle Johnson wrote:

> Hi!
>
> >So what part of the radio in particular would you use this for?
>
> The original thread about this was how to do fast DSP. An FPGA can do
> limited DSP functions at really high speeds. And the newer high-density,
> low cost FPGAs may be able to do enough, fast enough, at low enough cost to
> be interresting.
>
> Lyle

>
> ---
> You are currently subscribed to ss as: depagnier@uswest.net
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---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Re: (fwd) Spartan II availability and pricing

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 5 Jul 2000 17:22:32 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94833-2000.07.05-02.27.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Jul 05, 2000 at 12:19:47AM -0600, Dave wrote:
> Ok great Lyle thanks for pulling this back into context, but DSP to me means
> shift, multiply, accumulate. My question is: what part of the radio is the FPGA
> useful for? What DSP functions are we talking about here? Of course FIR or IIR
> filters are doable with DSP but what else are we talking here?

I was initially thinking about the PN sequence generation,
BPSK modulation, received PN sequence synchronization, etc.
There was a demonstration board described in a 1986 QEX article
which mapped quite well straight into an FPGA. You could do
this stuff with a normal DSP, although probably not a cheap one.

The advantage (in my opinion) of FPGA is that it is so parallel.
The FPGA can do all those tasks at the same time, while the DSP
has a limited number of clocks cycles between samples to get
everything done.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: (fwd) Spartan II availability and pricing

From: Robert McGwier <rwmcgwier@home.com>
Date: Wed, 05 Jul 2000 07:28:37 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94838-2000.07.05-06.33.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The prices in small quantities of the million gate arrays is
really getting very interesting.

At 01:15 AM 07/05/2000 Wednesday, you wrote:
>Hi!
>
> >So what part of the radio in particular would you use this for?
>
>The original thread about this was how to do fast DSP. An FPGA can do
>limited DSP functions at really high speeds. And the newer high-density,
>low cost FPGAs may be able to do enough, fast enough, at low enough cost to
>be interresting.
>
>Lyle
>
>
>
>---
>You are currently subscribed to ss as: rwmcgwier@home.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: (fwd) Spartan II availability and pricing

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Wed, 5 Jul 2000 06:46:40 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94874-2000.07.05-08.51.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

In the context of a "software radio" we simply use a wonderful
analog-digital converter (the kind made from non-obtanium, I guess :-) and
feed the bits into a digital signal processor. It then implements the
oscillators, mixers, filters, modulators, demodulators, etc.

Some of this might be done by the FPGA, some by a general purpose processor
(e.g., Pentium) or perhaps a dedicated, traditional DSP (e.g., Motorola or
Analog Devices or T.I.).

I think the excitement/interest level here is sparked by the dramatic price
reductions just put in place by Xilinx. We're talking a factor of about 5
here, along with significant performance gains and reductions in power
consumption.

Enjoy!

Lyle

-----Original Message-----
From: bounce-ss-14410@lists.tapr.org
[mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Dave
Sent: Tuesday, July 04, 2000 11:20 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: (fwd) Spartan II availability and pricing

Ok great Lyle thanks for pulling this back into context, but DSP to me means
shift, multiply, accumulate. My question is: what part of the radio is the
FPGA
useful for? What DSP functions are we talking about here? Of course FIR or
IIR
filters are doable with DSP but what else are we talking here?

-- Dave

Lyle Johnson wrote:

> Hi!
>
> >So what part of the radio in particular would you use this for?
>
> The original thread about this was how to do fast DSP. An FPGA can do
> limited DSP functions at really high speeds. And the newer high-density,
> low cost FPGAs may be able to do enough, fast enough, at low enough cost
to
> be interresting.
>
> Lyle
>
> ---
> You are currently subscribed to ss as: depagnier@uswest.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: wa7gxd@email.msn.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: ss digest: July 01, 2000

From: "Mark Barner" <barnermark@hotmail.com>
Date: Wed, 05 Jul 2000 15:32:33 PDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94951-2000.07.05-17.36.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Let me get this straight ...

1. You give me the specs.
2. I pay for the start-up and R&D expenses.
3. I give you the results.
4. You collect the profits.

Please correct me if I'm wrong.

barnermark@hotmail.com

>From: "TAPR Spread Spectrum Special Interest Group digest"
><ss@lists.tapr.org>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "ss digest recipients" <ss@lists.tapr.org>
>Subject: ss digest: July 01, 2000
>Date: Sun, 02 Jul 2000 00:00:45 -0500
>
>TAPR Spread Spectrum Special Interest Group Digest for Saturday, July 01,
>2000.
>
>1. New Radio project needs radioengengeers
>
>--
>
>Subject: New Radio project needs radioengengeers
>From: "M.B" <sm1ugt@hotmail.com>
>Date: Sat, 1 Jul 2000 20:45:12 +0200
>X-Message-Number: 1
>
>This is a multi-part message in MIME format.
>
>------=_NextPart_000_0074_01BFE39D.40808B80
>Content-Type: text/plain;
>   charset="iso-8859-1"
>Content-Transfer-Encoding: quoted-printable
>
>=20
>
> This is perhaps not a message that shall be here - but I am seeking =
>contact wih a radio engengeer.=20
>   Would like to ask for some help with a Digital radio design for a =
>802.11 project. You get a specification=20
>what needs to be done. You serve yourself with the instrumentation to =
>complete it. The design process=20
>must be fast - in 4 months or less there have to be a product. More =
>information futher if you write to:
>
>In any cases Write me To Marcel.Bos@abc.se   =20
>Or ICQ: 78210823
>
>------=_NextPart_000_0074_01BFE39D.40808B80
>Content-Type: text/html;
>   charset="iso-8859-1"
>Content-Transfer-Encoding: quoted-printable
>
><!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
><HTML><HEAD>
><META content=3D"text/html; charset=3Diso-8859-1" =
>http-equiv=3DContent-Type>
><META content=3D"MSHTML 5.00.2614.3500" name=3DGENERATOR>
><STYLE></STYLE>
></HEAD>
><BODY bgColor=3D#ffffff>
><DIV><FONT face=3DArial size=3D2> </FONT></DIV>
><DIV><FONT face=3DArial size=3D2></FONT> </DIV>
><DIV><FONT face=3DArial size=3D2> This is perhaps not a message =
>that shall be=20
>here - but I am seeking contact wih a radio engengeer. </FONT></DIV>
><DIV><FONT face=3DArial size=3D2> Would like to ask for some help =
>with a=20
>Digital radio design for a 802.11 project. You get a specification =
></FONT></DIV>
><DIV><FONT face=3DArial size=3D2>what needs to be done. You serve =
>yourself with the=20
>instrumentation to complete it. The design process </DIV>
><DIV><FONT face=3DArial size=3D2>must be fast - in 4 months or less =
>there have to be=20

>a product. More information futher if you write to:</FONT></DIV>
><DIV></FONT><FONT face=3DArial size=3D2></FONT> </DIV>
><DIV><FONT face=3DArial size=3D2>In any cases Write me To <A=20
>href=3D"mailto:Marcel.Bos@abc.se">Marcel.Bos@abc.se</A>   =
>=20
></FONT></DIV>
><DIV><FONT face=3DArial size=3D2>Or ICQ: =
>78210823</FONT></DIV></BODY></HTML>
>
>------=_NextPart_000_0074_01BFE39D.40808B80--
>
>
>
>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to ss as: barnermark@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Re: (fwd) Spartan II availability and pricing

From: "Paul Van Wie" <w8ox@sprynet.com>
Date: Wed, 5 Jul 2000 16:15:29 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-94962-2000.07.05-18.17.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hamish,

Thanks for the reply and the info on the FPGAs. I have never used them, but
they sound very interesting and versatile.

I used to do a lot of building in the 60's and 70's mostly TUs for RTTY and
associated logic stuff (SELCAL etc). I am hoping to find some ethernet WLAN
cards and play with them. Several people in the area have expressed an
ineterest in getting a SS group going here on 900 MHz, but no one has
actually done anything on it as yet.

I doubt that the others do any building etc, so if we can find something
that is somewhat complete, I can get them going and we can take it from
there.   I received a response suggesting I might try Frys electronics in
Phoenix. Have been in there gigantic store several times, but never thought
they might be a source for these cards. I will check into that and see what
they might have.

Thanks again for your response. I will be keeping watch on the reflector
for addittional information.

73,
Paul
W8OX

----- Original Message -----
From: Hamish Moffatt <hamish@cloud.net.au>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Sent: Tuesday, July 04, 2000 3:21 PM
Subject: [ss] Re: (fwd) Spartan II availability and pricing

On Tue, Jul 04, 2000 at 10:15:57AM -0700, PAUL VAN WIE wrote:
> I am just getting into SS, and am not familiar with all these chips. I
> wonder if you would please tell me what the function of these chips are?
I
> am trying to hunt down some wireless LAN ethernet boards in the
> Phoeniz/Tucson area but not having any success to date.

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logic gates which you can program to do anything you want.

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I'm only familar with the Xilinx parts.

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editor. (You can also enter it using a hardware description language
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chip families too; the older 4000 and Spartan families had two flip
flops per CLB, but a Virtex or Spartan-II has 4.

The web site http://www.optimagic.com/ may have some more information.

Cheers,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] Re: (fwd) Spartan II availability and pricing

From: Jim Sanford <wb4gcs@home.com>
Date: Thu, 06 Jul 2000 19:28:21 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-95146-2000.07.06-18.32.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lyle:
Did they drop their price on development tools? I looked hard at them a couple
of years ago, and just couldn't afford their stuff.

Thanks & 73,
Jim
wb4gcs@amsat.org

Lyle Johnson wrote:

> Hi!
>
> In the context of a "software radio" we simply use a wonderful
> analog-digital converter (the kind made from non-obtanium, I guess :-) and
> feed the bits into a digital signal processor. It then implements the
> oscillators, mixers, filters, modulators, demodulators, etc.
>
> Some of this might be done by the FPGA, some by a general purpose processor
> (e.g., Pentium) or perhaps a dedicated, traditional DSP (e.g., Motorola or
> Analog Devices or T.I.).
>
> I think the excitement/interest level here is sparked by the dramatic price

> reductions just put in place by Xilinx. We're talking a factor of about 5
> here, along with significant performance gains and reductions in power
> consumption.
>
> Enjoy!
>
> Lyle
>
> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Dave
> Sent: Tuesday, July 04, 2000 11:20 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: (fwd) Spartan II availability and pricing
>
> Ok great Lyle thanks for pulling this back into context, but DSP to me means
> shift, multiply, accumulate. My question is: what part of the radio is the
> FPGA
> useful for? What DSP functions are we talking about here? Of course FIR or
> IIR
> filters are doable with DSP but what else are we talking here?
>
> -- Dave
>
> Lyle Johnson wrote:
>
> > Hi!
> >
> > >So what part of the radio in particular would you use this for?
> >
> > The original thread about this was how to do fast DSP. An FPGA can do
> > limited DSP functions at really high speeds. And the newer high-density,
> > low cost FPGAs may be able to do enough, fast enough, at low enough cost
> to
> > be interresting.
> >
> > Lyle
> >
> > ---
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> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
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> ---
> You are currently subscribed to ss as: wa7gxd@email.msn.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
> ---
> You are currently subscribed to ss as: WB4GCS@AMSAT.ORG
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] Re: (fwd) Spartan II availability and pricing

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Thu, 6 Jul 2000 17:10:54 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-95152-2000.07.06-19.15.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, a couple years ago they introduced the Foundation series, and the
schematic-based version is $95. A couple months ago they changed things so
that you have to pay the $95 every year, rather than as a one-time deal.
This keeps you current with the lastest chips, algorithms, etc. As fast as
this technology moves, a hundred bucks a year is cheap, too :-)

73,

Lyle

-----Original Message-----
From: bounce-ss-14410@lists.tapr.org
[mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Jim Sanford
Sent: Thursday, July 06, 2000 4:28 PM
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: (fwd) Spartan II availability and pricing

Lyle:
Did they drop their price on development tools? I looked hard at them a
couple
of years ago, and just couldn't afford their stuff.

Thanks & 73,
Jim
wb4gcs@amsat.org

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] Looking for Accurate Time "Hack" w/802.11

From: Paul Sadowski <sadowski@bellsouth.net>
Date: Fri, 07 Jul 2000 22:17:41 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-95339-2000.07.07-21.29.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm stumped and figured this group could give me a hint or two... Bottom
line, I need to be able to get a pulse from an 802.11 receiver after some
fixed time after the last bit of the transmitter address is received (MAC
address?). I need the pulse from each receiver in a group of about a dozen
receivers... and the edge must be at the same time (give or take 5
nanoseconds.... yep, five nanoseconds) across all twelve of the receivers....
If all the receivers were co-located... they would all output a pulse within 5
nanoseconds of each other...

BTW... I won't be dogmatic about what I'm trying to do, I'd be happy with any
relatively low cost RF solution that would give me the time accuracy... and
allow me to ultimately have a half dozen transmitters use the same freq...
with the dozen receivers.... with a unique transmitted serial number for each
xmtr... and I'd really love a byte or two of data along with the serial
number... I only need a reliable range of about 100 meters for the
transmitters to the receivers....

I'd sure appreciate the help... I will post any successful solution to the
SIG for anyone else to use/copy.......

ALOHA
AH6LS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: Looking for Accurate Time "Hack" w/802.11

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Fri, 7 Jul 2000 23:30:45 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-95341-2000.07.07-22.37.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I know a few things about how the Intersil 802.11 (HFA3860) chipset works.
Internally, the chip spins up a clock to 88 MHz (11.36 ns). This clock is
used
to align the receiver to the incoming chips and to generate an 11 MHz rx
data
clock. The rx clock is synchronous to the local 88 MHz but jump in phase by
+/- 11 ns as needed to center the data and match differences in transmitter
frequency. In addition, the clock phase has some jumps at 512 bit
intervals.
The net effect is to produce an 11 MHz output clock with some jitter on the
edges

I think this characteristic puts a limit on the accuracy of signal timing
that
falls short of your requirement by about 2:1.

jeff
wa1hco

----- Original Message -----

From: "Paul Sadowski" <sadowski@bellsouth.net>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Friday, July 07, 2000 10:17 PM
Subject: [ss] Looking for Accurate Time "Hack" w/802.11

> I'm stumped and figured this group could give me a hint or two... Bottom
> line, I need to be able to get a pulse from an 802.11 receiver after some
> fixed time after the last bit of the transmitter address is received (MAC
> address?). I need the pulse from each receiver in a group of about a
dozen
> receivers... and the edge must be at the same time (give or take 5
> nanoseconds.... yep, five nanoseconds) across all twelve of the
receivers....
> If all the receivers were co-located... they would all output a pulse
within 5
> nanoseconds of each other...
>
> BTW... I won't be dogmatic about what I'm trying to do, I'd be happy with
any
> relatively low cost RF solution that would give me the time accuracy...
and
> allow me to ultimately have a half dozen transmitters use the same freq...
> with the dozen receivers.... with a unique transmitted serial number for
each
> xmtr... and I'd really love a byte or two of data along with the serial
> number... I only need a reliable range of about 100 meters for the
> transmitters to the receivers....
>
> I'd sure appreciate the help... I will post any successful solution to
the
> SIG for anyone else to use/copy.......
>
> ALOHA
> AH6LS
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

19. [ss] Re: Looking for Accurate Time "Hack" w/802.11

From: Brett Glass <brett@lariat.org>
Date: Sat, 08 Jul 2000 19:20:32 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-95457-2000.07.08-20.25.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

5 ns? Wow. I wouldn't use 802.11 for this. Too much slop. In fact, you'd be hard put to get that sort of
 accuracy out of a hardwired distribution network. What are you trying to achieve?

--Brett

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] Interesting Site

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Mon, 10 Jul 2000 10:20:57 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-95670-2000.07.10-09.30.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Folks, I ran into this site while digging around for data on w-CDMA
systems.

http://www.celeritek.com/

Chuck Hast
Telecomms Consultant, Utility Partners.

```
Office number:          813.282.8828 x 1175
C-phone number:         813.765.6743
E-mail:                 wchast@utilpart.com
SMS  < 150 characters:  8137656743@mobile.att.net



---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

21. [ss] Right Direction

From: "William C. Hast" <wchast@utilpart.com>
Date: Thu, 13 Jul 2000 14:46:24
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96392-2000.07.13-14.51.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
Folks:
These guys are going the right direction, the just
need to put in a real SS RF deck.

Go take a look at it and see what you think.

http://www.cybiko.com/

I think that they have the right concept. They
just need to do a bit of work on it.

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

22. [ss] Re: Right Direction

From: Jeff King <jeff@aerodata.net>
Date: Thu, 13 Jul 2000 16:04:46 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96398-2000.07.13-15.06.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
It actually looks kind of interesting, the entire product that is.
Kind of what the Palm and WINCE boxes should be. This
short range RF concept, every device be interconnected, really
is the way to go. Unlike the uwb and bluetooth folks, they appear
to be shipping(?).

I suspect SS is not at all involved here, the 30 channels may be
just that, channels and not what the unit hops on. Might just
have been for cost considerations.... I'm sure they would want
more range if they could get it.

Notice, they also allow anyone to be a developer.....

Thanks for the URL.

-Jeff


"William C. Hast" wrote:

> Folks:
> These guys are going the right direction, the just
> need to put in a real SS RF deck.
>
> Go take a look at it and see what you think.
>
> http://www.cybiko.com/
>
> I think that they have the right concept. They
> just need to do a bit of work on it.
>
> ---
> You are currently subscribed to ss as: jeff@aerodata.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org


---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

23. [ss] Re: Right Direction

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Thu, 13 Jul 2000 16:22:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96403-2000.07.13-15.29.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yep... NOT SS and range is limited to just a few feet!

Also, their choice of the 900 MHz ISM band is a horrible mistake... QRM, QRN, and all the intermod generated that falls into this band is unreal! Main reason we discontinued all products in 900 MHz ISM band and went to 2.4 GHz ISM band... also allows us to ship world wide (very high acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in USA, Canada and Mexico (legally).

73,

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
One Meca Way
Norcross, GA 30093, USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular Phone: 678.429.2124
OEM E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com
SSuRFnet E-mail: k4bet@ssurfnet.com
http://www.ssurfnet.com

Visit with us at ISA Expo 2000!
Booth 1843
21 - 24 August, 2000
New Orleans, LA USA
http://www.isa.org/events/

----- Original Message -----
From: "William C. Hast" <wchast@utilpart.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Thursday, July 13, 2000 2:46 PM
Subject: [ss] Right Direction

: Folks:
: These guys are going the right direction, the just
: need to put in a real SS RF deck.
:
: Go take a look at it and see what you think.
:
: http://www.cybiko.com/
:
: I think that they have the right concept. They
: just need to do a bit of work on it.
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] Re: Right Direction

From: Dave <depagnier@uswest.net>
Date: Thu, 13 Jul 2000 22:03:04 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96474-2000.07.13-23.05.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I hate to rain on your parade, but going in the right direction for what? Wireless chat at 150'? If the person's that close I'll get up and talk to them eye to eye. Organizer? Maybe... but it's bigger than a Palm. Internet? screen's kind of small ain't it? Games? I wish I had the

time. Friend finder? Maybe it'll come in handy at the next Rolling
Stones Concert. This is a toy if I've ever seen one. Maybe something fun
for the kids. I can't imagine what I'd use it for. Someone obviously
disagrees with me and has put beaucoup bucks into it to be able to sell
the thing for $129. Maybe I'll get one for my kid for xmas.

bah humbug

--Dave

"William C. Hast" wrote:

> Folks:
> These guys are going the right direction, the just
> need to put in a real SS RF deck.
>
> Go take a look at it and see what you think.
>
> http://www.cybiko.com/
>
> I think that they have the right concept. They
> just need to do a bit of work on it.
>
> ---
> You are currently subscribed to ss as: depagnier@uswest.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] Re: Right Direction

From: Derek Lassen <kn6td@clubnet.net>
Date: Fri, 14 Jul 2000 01:51:40 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96515-2000.07.14-03.57.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Anybody get one yet?
What's the processor?

I wonder if there is a market for a game server / range extender (small
enough to stay in the backpack).

:>

(s) Derek

At 10:03 PM 7/13/00 -0600, you wrote:
>I hate to rain on your parade, but going in the right direction for
>what? Wireless chat at 150'? If the person's that close I'll get up and
>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
>Palm. Internet? screen's kind of small ain't it? Games? I wish I had the
>time. Friend finder? Maybe it'll come in handy at the next Rolling
>Stones Concert. This is a toy if I've ever seen one. Maybe something fun
>for the kids. I can't imagine what I'd use it for. Someone obviously
>disagrees with me and has put beaucoup bucks into it to be able to sell
>the thing for $129. Maybe I'll get one for my kid for xmas.
>
>bah humbug
>
>--Dave
>
>"William C. Hast" wrote:
>
> > Folks:
> > These guys are going the right direction, the just
> > need to put in a real SS RF deck.
> >
> > Go take a look at it and see what you think.
> >
> > http://www.cybiko.com/
> >
> > I think that they have the right concept. They
> > just need to do a bit of work on it.
> >
> > ---
> > You are currently subscribed to ss as: depagnier@uswest.net

> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] Re: Right Direction

From: Derek Lassen <kn6td@clubnet.net>
Date: Fri, 14 Jul 2000 01:59:33 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96516-2000.07.14-04.05.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I just looked at the web site - I shoulda RTFM. Sorry.

Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
seems to have a compact flash.

RF communications is via 19k on 915 MHz GMSK.

73 de KN6TD

(s) Derek

At 01:51 AM 7/14/00 -0700, you wrote:
>Anybody get one yet?
>What's the processor?
>
>I wonder if there is a market for a game server / range extender (small
>enough to stay in the backpack).
>
>:>
>
>(s) Derek
>
>At 10:03 PM 7/13/00 -0600, you wrote:
>>I hate to rain on your parade, but going in the right direction for
>>what? Wireless chat at 150'? If the person's that close I'll get up and
>>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
>>Palm. Internet? screen's kind of small ain't it? Games? I wish I had the
>>time. Friend finder? Maybe it'll come in handy at the next Rolling
>>Stones Concert. This is a toy if I've ever seen one. Maybe something fun
>>for the kids. I can't imagine what I'd use it for. Someone obviously
>>disagrees with me and has put beaucoup bucks into it to be able to sell
>>the thing for $129. Maybe I'll get one for my kid for xmas.
>>
>>bah humbug
>>
>>--Dave
>>
>>"William C. Hast" wrote:
>>
>> > Folks:
>> > These guys are going the right direction, the just
>> > need to put in a real SS RF deck.
>> >
>> > Go take a look at it and see what you think.
>> >
>> > http://www.cybiko.com/
>> >
>> > I think that they have the right concept. They
>> > just need to do a bit of work on it.
>> >
>> > ---
>> > You are currently subscribed to ss as: depagnier@uswest.net
>> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: Right Direction

From: "venumadhav josyula" <venumadhavj@hotmail.com>
Date: Fri, 14 Jul 2000 04:33:31 PDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96524-2000.07.14-06.38.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

hey paul,

I am student doing my masters in ee, my area of specilization is ss and
datacommunications.

1   you say all the intermod that is generated in this band is unreal
why is this?
2 secondly what is reason of using 2.4ghz.
3 Are you talking about wireless internet and data services ?

thanking you
yours sincerely

>From: "Paul McInnish" <pmcinnish@digiwrls.com>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Subject: [ss] Re: Right Direction
>Date: Thu, 13 Jul 2000 16:22:39 -0400
>MIME-Version: 1.0
>Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
>MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
>From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
>Return-Path: <PMcinnish@digiwrls.com>
>Message-ID:
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org>
>References:
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.org>
>Organization: Digital Wireless Corporation
>X-Priority: 3
>X-MSMail-Priority: Normal
>X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
>X-MDaemon-Deliver-To: ss@lists.tapr.org
>X-Return-Path: pmcinnish@digiwrls.com
>List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
>List-Software: Lyris Server version 3.0
>List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
>List-Owner: <mailto:owner-ss@lists.tapr.org>
>X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
>X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
>Sender: bounce-ss-17222@lists.tapr.org
>Precedence: bulk
>
>Yep... NOT SS and range is limited to just a few feet!
>
>Also, their choice of the 900 MHz ISM band is a horrible mistake... QRM,
>QRN, and all the intermod generated that falls into this band is unreal!
>Main reason we discontinued all products in 900 MHz ISM band and went to
>2.4
>GHz ISM band... also allows us to ship world wide (very high acceptance of
>product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
>USA, Canada and Mexico (legally).
>
>73,
>
>Paul McInnish - K4BET
>Manager, Business Development
>Digital Wireless Corp.
>One Meca Way
>Norcross, GA 30093, USA
>Pho: 770.564.5540, Ext. 2342
>Fax: 770.564.5541
>Cellular Phone: 678.429.2124
>OEM E-mail: k4bet@digital-wireless.com
>http://www.digital-wireless.com
>SSuRFnet E-mail: k4bet@ssurfnet.com
>http://www.ssurfnet.com
>
>Visit with us at ISA Expo 2000!
>Booth 1843

>21 - 24 August, 2000
>New Orleans, LA USA
>http://www.isa.org/events/
>
>----- Original Message -----
>From: "William C. Hast" <wchast@utilpart.com>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Sent: Thursday, July 13, 2000 2:46 PM
>Subject: [ss] Right Direction
>
>
>: Folks:
>: These guys are going the right direction, the just
>: need to put in a real SS RF deck.
>:
>: Go take a look at it and see what you think.
>:
>: http://www.cybiko.com/
>:
>: I think that they have the right concept. They
>: just need to do a bit of work on it.
>:
>: ---
>: You are currently subscribed to ss as: k4bet@digital-wireless.com
>: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>:
>:
>
>
>
>---
>You are currently subscribed to ss as: venumadhavj@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] Re: Right Direction

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Fri, 14 Jul 2000 07:32:35 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96525-2000.07.14-06.42.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I called them and talked to them. They appear VERY open to
ideas and recommendations. Indeed the RF deck is a deck
out of a 900 MHz discrete channel phone (as told to me by
them) there are 30 selectable channels and according to the
propaganda each channel can support up to 100 interconnected
users.

For those who do not think much of it, I guess it ain't much but
like my grandmomma said one day, "wish in one hand and spit
in the other and see which fills the fastest", some times I think
we do a lot of wishing and not enough spittin', so here we
stand empty handed, and some company out there is bringing
out the beginnings of the box we have been wishing for.

In talking to them they sounded like the would like to develop
a device and a network concept that would be like the ricochet
system, or a cell like system, but they were VERY open to
ideas and recommendations.

They also want to do voice, but do not handle it yet. I believe
the sound part is all there it is probably a software issue.

I will repeat my self again, if we want to get some volume on
these things we are going to have to get the volume radio users
(voice users) involved, or I fear we will continue to spend a lot
of time wishing. I totally favor a data world, but reality is that
the world is a voice world, and the best way to get volume is
to convert that voice into a data stream and then do neat magic
with it that will make the voice users want to get on your system,

pay the (insert monetary unit here) to do so and keep from draining
YOUR pocket so much.

Yes this box is crude and rude but, it is a start. I can probably do
better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
some software in there to handle the voice part and a access point
well place on top of my building to use it a few hundred yards from
the building, but the cost is now up there at over 1K USD.

If they can keep the cost on this down near where it is now, and
still field a SS device that can work through a hub or SS repeater,
and carry a bit of power behind it (up to the 1 watt part 15 max)
then they are really going the right direction for the volume user.

Go out and look at the web site, give them a call, or a e-mail and
see what you make of it.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: Right Direction

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Fri, 14 Jul 2000 11:21:49 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96547-2000.07.14-10.29.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

See response embedded below:

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
One Meca Way
Norcross, GA 30093, USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular Phone: 678.429.2124
OEM E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com
SSuRFnet E-mail: k4bet@ssurfnet.com
http://www.ssurfnet.com

Visit with us at ISA Expo 2000!
Booth 1843
21 - 24 August, 2000
New Orleans, LA USA
http://www.isa.org/events/
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and much nicer);
Effective 14 August 2000:

Digital Wireless Corporation
5375 Oakbrook Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax: 678.684.2001

----- Original Message -----
From: "venumadhav josyula" <venumadhavj@hotmail.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Friday, July 14, 2000 7:33 AM
Subject: [ss] Re: Right Direction

: hey paul,
:
: I am student doing my masters in ee, my area of specilization is ss and
: datacommunications.
:
: 1   you say all the intermod that is generated in this band is unreal
: why is this?
It is 2nd., 3rd. and 4th. order harmonics from paging systems, two-way radio systems, TV stations,
microwave ovens, etc. We have taken (usually in larger metro areas, a spectrum analyzer and taken a
look at 900 MHz ISM band... and the display looks like a "Prarie Grass field in a 50 mile per hour wind
and majority of the 'jamming' signals are very high in amplitude. No way can critical data applications
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

tolerate this. Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory Automation control?

: 2 secondly what is reason of using 2.4ghz.
As I stated in my original message: "QRM, QRN, and all the intermod generated that falls into this band is unreal! Main reason we discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM band... also allows us to ship world wide (very high acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in USA, Canada and Mexico (legally)."

: 3 Are you talking about wireless internet and data services ?
Our core business is commercial and industrial and we took this proven and accepted OEM SS Transceiver Module and developed a line of ISP and Ethernet products.

I am doing some neat things at home with some of our products... in the event my home ISP is monitoring this server. just expermenting when I tell this... "I have ADSL @ home & sending a full connection to/from daugher & son-in-law a mile away! By bridging my LAN at home with their LAN at their home!" Using a router so the ISP only sees one IP! (Also provides the firewall I need for security.)

I hope the group does not object to any response such as this because I do not want to convert a 'ham radio oriented' list server into a commercial venture... however, I have a ball dealing in the SS world. Its fun!

:
: thanking you
: yours sincerely
:
:
:
: >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: >Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >Subject: [ss] Re: Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
: >MIME-Version: 1.0
: >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
: >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
: >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: >Return-Path: <PMcinnish@digiwrls.com>
: >Message-ID:
: ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org>
: >References:
: ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.org>
: >Organization: Digital Wireless Corporation
: >X-Priority: 3
: >X-MSMail-Priority: Normal
: >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: >X-MDaemon-Deliver-To: ss@lists.tapr.org
: >X-Return-Path: pmcinnish@digiwrls.com
: >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: >List-Software: Lyris Server version 3.0
: >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: >List-Owner: <mailto:owner-ss@lists.tapr.org>
: >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: bounce-ss-17222@lists.tapr.org
: >Precedence: bulk
: >
: >Yep... NOT SS and range is limited to just a few feet!
: >
: >Also, their choice of the 900 MHz ISM band is a horrible mistake... QRM,
: >QRN, and all the intermod generated that falls into this band is unreal!
: >Main reason we discontinued all products in 900 MHz ISM band and went to
: >2.4
: >GHz ISM band... also allows us to ship world wide (very high acceptance of
: >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: >USA, Canada and Mexico (legally).
: >
: >73,
: >
: >Paul McInnish - K4BET
: >Manager, Business Development
: >Digital Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, USA
: >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: >Cellular Phone: 678.429.2124
: >OEM E-mail: k4bet@digital-wireless.com
: >http://www.digital-wireless.com

: >SSuRFnet E-mail: k4bet@ssurfnet.com
: >http://www.ssurfnet.com
: >
: >Visit with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August, 2000
: >New Orleans, LA USA
: >http://www.isa.org/events/
: >
: >----- Original Message -----
: >From: "William C. Hast" <wchast@utilpart.com>
: >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >Sent: Thursday, July 13, 2000 2:46 PM
: >Subject: [ss] Right Direction
: >
: >
: >: Folks:
: >: These guys are going the right direction, the just
: >: need to put in a real SS RF deck.
: >:
: >: Go take a look at it and see what you think.
: >:
: >: http://www.cybiko.com/
: >:
: >: I think that they have the right concept. They
: >: just need to do a bit of work on it.
: >:
: >: ---
: >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >:
: >:
: >
: >
: >
: >---
: >You are currently subscribed to ss as: venumadhavj@hotmail.com
: >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
:
: _____
: Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

30. [ss] Re: STEL chipsets

From: Nitin Jain <nitin_jain_india@yahoo.com>
Date: Sat, 15 Jul 2000 05:36:32 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96682-2000.07.15-07.41.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All,
I am developing an all digital DS-SS modem. I am using
STEL-2410 (Stanford Telecom) and STEL-1032 for
correlation and PN code generation. And for all other
tasks like code acquisition logic, code tracking, data
demodulation, I use DSP.
 I want to have interaction with the people who have
used above mentioned chips for developing SS modems.
Thanks.
Nitin Jain
M(RS)
Central research lab.
INDIA

_____
Do You Yahoo!?
Get Yahoo! Mail Free email you can access from anywhere!
http://mail.yahoo.com/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

31. [ss] Re: STEL chipsets

From: "Pablo Guillermo LOZANO" <plozano74@hotmail.com>
Date: Sat, 15 Jul 2000 15:45:03 -0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96741-2000.07.15-13.52.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hola Jain
Mi nombre es Pablo LOZANO y estoy desarrollando un DS-SS modem, estoy en la etapa final y he logrado transmitir datos a un velocidad de 227Kbps, estoy usando el STEL-2000A.
Si lo deseas podemos intercambiar información.
Saludos, cordialmente Pablo
----- Original Message -----
From: Nitin Jain <nitin_jain_india@yahoo.com>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Sent: Saturday, July 15, 2000 9:36 AM
Subject: [ss] Re: STEL chipsets

> Hi All,
> I am developing an all digital DS-SS modem. I am using
> STEL-2410 (Stanford Telecom) and STEL-1032 for
> correlation and PN code generation. And for all other
> tasks like code acquisition logic, code tracking, data
> demodulation, I use DSP.
> I want to have interaction with the people who have
> used above mentioned chips for developing SS modems.
> Thanks.
> Nitin Jain
> M(RS)
> Central research lab.
> INDIA
>
> _____
> Do You Yahoo!?
> Get Yahoo! Mail - Free email you can access from anywhere!
> http://mail.yahoo.com/
>
> ---
> You are currently subscribed to ss as: plozano74@hotmail.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

32. [ss] Re: ss digest: July 14, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Sat, 15 Jul 2000 20:43:36 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-96783-2000.07.15-19.47.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Something I don't understand regarding intermod in the 900 MHz ISM band...

Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and up.
I don't doubt about the harmonics from TV stations in metro areas, but...

I listed to the 900 MHz band almost daily, and hear nothing, or see
nothing on the analyser. Of course I am in a rural area.

We do have several pagers around 931. The rest of it is very quiet.

Jim Ussailis, W1EQO

National Wireless, Inc

On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Friday, July 14, 2000.
>
> 1. Re: Right Direction

> 2. Re: Right Direction
> 3. Re: Right Direction
> 4. Re: Right Direction
> 5. Re: Right Direction
>
> --
>
> Subject: Re: Right Direction
> From: Derek Lassen <kn6td@clubnet.net>
> Date: Fri, 14 Jul 2000 01:51:40 -0700
> X-Message-Number: 1
>
> Anybody get one yet?
> What's the processor?
>
> I wonder if there is a market for a game server / range extender (small
> enough to stay in the backpack).
>
> :>
>
> (s) Derek
>
> At 10:03 PM 7/13/00 -0600, you wrote:
> >I hate to rain on your parade, but going in the right direction for
> >what? Wireless chat at 150'? If the person's that close I'll get up and
> >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
> >Palm. Internet? screen's kind of small ain't it? Games? I wish I had the
> >time. Friend finder? Maybe it'll come in handy at the next Rolling
> >Stones Concert. This is a toy if I've ever seen one. Maybe something fun
> >for the kids. I can't imagine what I'd use it for. Someone obviously
> >disagrees with me and has put beaucoup bucks into it to be able to sell
> >the thing for $129. Maybe I'll get one for my kid for xmas.
> >
> >bah humbug
> >
> >--Dave
> >
> >"William C. Hast" wrote:
> >
> > > > Folks:
> > > > These guys are going the right direction, the just
> > > > need to put in a real SS RF deck.
> > > >
> > > > Go take a look at it and see what you think.
> > > >
> > > > http://www.cybiko.com/
> > > >
> > > > I think that they have the right concept. They
> > > > just need to do a bit of work on it.
> > > >
> > > > ---
> > > > You are currently subscribed to ss as: depagnier@uswest.net
> > > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > >
> > >
> >---
> >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
> --
>
> Subject: Re: Right Direction
> From: Derek Lassen <kn6td@clubnet.net>
> Date: Fri, 14 Jul 2000 01:59:33 -0700
> X-Message-Number: 2
>
> I just looked at the web site - I shoulda RTFM. Sorry.
>
> Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
> seems to have a compact flash.
>
> RF communications is via 19k on 915 MHz GMSK.
>
> 73 de KN6TD
>
> (s) Derek
>

> At 01:51 AM 7/14/00 -0700, you wrote:
> >Anybody get one yet?
> >What's the processor?
> >
> >I wonder if there is a market for a game server / range extender (small
> >enough to stay in the backpack).
> >
> >:>
> >
> >(s) Derek
> >
> >At 10:03 PM 7/13/00 -0600, you wrote:
> >>I hate to rain on your parade, but going in the right direction for
> >>what? Wireless chat at 150'? If the person's that close I'll get up and
> >>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
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> >>Stones Concert. This is a toy if I've ever seen one. Maybe something fun
> >>for the kids. I can't imagine what I'd use it for. Someone obviously
> >>disagrees with me and has put beaucoup bucks into it to be able to sell
> >>the thing for $129. Maybe I'll get one for my kid for xmas.
> >>
> >>bah humbug
> >>
> >>--Dave
> >>
> >>"William C. Hast" wrote:
> >>
> >> > Folks:
> >> > These guys are going the right direction, the just
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> >> > just need to do a bit of work on it.
> >> >
> >> > ---
> >> > You are currently subscribed to ss as: depagnier@uswest.net
> >> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
> --
>
> Subject: Re: Right Direction
> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> Date: Fri, 14 Jul 2000 04:33:31 PDT
> X-Message-Number: 3
>
> hey paul,
>
> I am student doing my masters in ee, my area of specilization is ss and
> datacommunications.
>
> 1   you say all the intermod that is generated in this band is unreal
> why is this?
> 2 secondly what is reason of using 2.4ghz.
> 3 Are you talking about wireless internet and data services ?
>
> thanking you
> yours sincerely
>
>
>
> >From: "Paul McInnish" <pmcinnish@digiwrls.com>
> >Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >Subject: [ss] Re: Right Direction
> >Date: Thu, 13 Jul 2000 16:22:39 -0400
> >MIME-Version: 1.0
> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
> >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
> >Return-Path: <PMcinnish@digiwrls.com>
> >Message-ID:
> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org>

> >References:
> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.org>
> >Organization: Digital Wireless Corporation
> >X-Priority: 3
> >X-MSMail-Priority: Normal
> >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
> >X-MDaemon-Deliver-To: ss@lists.tapr.org
> >X-Return-Path: pmcinnish@digiwrls.com
> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> >List-Software: Lyris Server version 3.0
> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> >List-Owner: <mailto:owner-ss@lists.tapr.org>
> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
> >Sender: bounce-ss-17222@lists.tapr.org
> >Precedence: bulk
> >
> >Yep... NOT SS and range is limited to just a few feet!
> >
> >Also, their choice of the 900 MHz ISM band is a horrible mistake... QRM,
> >QRN, and all the intermod generated that falls into this band is unreal!
> >Main reason we discontinued all products in 900 MHz ISM band and went to
> >2.4
> >GHz ISM band... also allows us to ship world wide (very high acceptance of
> >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
> >USA, Canada and Mexico (legally).
> >
> >73,
> >
> >Paul McInnish - K4BET
> >Manager, Business Development
> >Digital Wireless Corp.
> >One Meca Way
> >Norcross, GA 30093, USA
> >Pho: 770.564.5540, Ext. 2342
> >Fax: 770.564.5541
> >Cellular Phone: 678.429.2124
> >OEM E-mail: k4bet@digital-wireless.com
> >http://www.digital-wireless.com
> >SSuRFnet E-mail: k4bet@ssurfnet.com
> >http://www.ssurfnet.com
> >
> >Visit with us at ISA Expo 2000!
> >Booth 1843
> >21 - 24 August, 2000
> >New Orleans, LA USA
> >http://www.isa.org/events/
> >
> >----- Original Message -----
> >From: "William C. Hast" <wchast@utilpart.com>
> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >Sent: Thursday, July 13, 2000 2:46 PM
> >Subject: [ss] Right Direction
> >
> >
> >: Folks:
> >: These guys are going the right direction, the just
> >: need to put in a real SS RF deck.
> >:
> >: Go take a look at it and see what you think.
> >:
> >: http://www.cybiko.com/
> >:
> >: I think that they have the right concept. They
> >: just need to do a bit of work on it.
> >:
> >: ---
> >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >:
> >:
> >
> >
> >
> >---
> >You are currently subscribed to ss as: venumadhavj@hotmail.com
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
>

> _____
> Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
>
>
> ----------
>
> Subject: Re: Right Direction
> From: "Hast, Chuck" <wchast@utilpart.com>
> Date: Fri, 14 Jul 2000 07:32:35 -0400
> X-Message-Number: 4
>
> I called them and talked to them. They appear VERY open to
> ideas and recommendations. Indeed the RF deck is a deck
> out of a 900 MHz discrete channel phone (as told to me by
> them) there are 30 selectable channels and according to the
> propaganda each channel can support up to 100 interconnected
> users.
>
> For those who do not think much of it, I guess it ain't much but
> like my grandmomma said one day, "wish in one hand and spit
> in the other and see which fills the fastest", some times I think
> we do a lot of wishing and not enough spittin', so here we
> stand empty handed, and some company out there is bringing
> out the beginnings of the box we have been wishing for.
>
> In talking to them they sounded like the would like to develop
> a device and a network concept that would be like the ricochet
> system, or a cell like system, but they were VERY open to
> ideas and recommendations.
>
> They also want to do voice, but do not handle it yet. I believe
> the sound part is all there it is probably a software issue.
>
> I will repeat my self again, if we want to get some volume on
> these things we are going to have to get the volume radio users
> (voice users) involved, or I fear we will continue to spend a lot
> of time wishing. I totally favor a data world, but reality is that
> the world is a voice world, and the best way to get volume is
> to convert that voice into a data stream and then do neat magic
> with it that will make the voice users want to get on your system,
> pay the (insert monetary unit here) to do so and keep from draining
> YOUR pocket so much.
>
> Yes this box is crude and rude but, it is a start. I can probably do
> better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
> some software in there to handle the voice part and a access point
> well place on top of my building to use it a few hundred yards from
> the building, but the cost is now up there at over 1K USD.
>
> If they can keep the cost on this down near where it is now, and
> still field a SS device that can work through a hub or SS repeater,
> and carry a bit of power behind it (up to the 1 watt part 15 max)
> then they are really going the right direction for the volume user.
>
> Go out and look at the web site, give them a call, or a e-mail and
> see what you make of it.
>
>
>
>
> ----------
>
> Subject: Re: Right Direction
> From: "Paul McInnish" <pmcinnish@digiwrls.com>
> Date: Fri, 14 Jul 2000 11:21:49 -0400
> X-Message-Number: 5
>
> This is a multi-part message in MIME format.
>
> ------=_NextPart_000_04CC_01BFED85.B40939C0
> Content-Type: text/plain;
>   charset="Windows-1252"
> Content-Transfer-Encoding: quoted-printable
>
> See response embedded below:
>
> Paul McInnish - K4BET
> Manager, Business Development
> Digital Wireless Corp.

> One Meca Way
> Norcross, GA 30093, USA
> Pho: 770.564.5540, Ext. 2342
> Fax: 770.564.5541
> Cellular Phone: 678.429.2124
> OEM E-mail: k4bet@digital-wireless.com
> http://www.digital-wireless.com
> SSuRFnet E-mail: k4bet@ssurfnet.com
> http://www.ssurfnet.com
>
> Visit with us at ISA Expo 2000!
> Booth 1843
> 21 - 24 August, 2000
> New Orleans, LA USA
> http://www.isa.org/events/
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> New address (bigger and much nicer);
> Effective 14 August 2000:
>
> Digital Wireless Corporation
> 5375 Oakbrook Parkway
> Norcross, GA 30093 USA
> Pho: 678.684.2000
> Fax: 678.684.2001
>
> ----- Original Message -----=20
> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Friday, July 14, 2000 7:33 AM
> Subject: [ss] Re: Right Direction
>
>
> : hey paul,
> :=20
> : I am student doing my masters in ee, my area of specilization is ss =
> and=20
> : datacommunications.
> :=20
> : 1   you say all the intermod that is generated in this band is unreal =
>   =20
> : why is this?
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> high in amplitude. No way can critical data applications tolerate this. =
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> Automation control?
>
> : 2 secondly what is reason of using 2.4ghz.
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> generated that falls into this band is unreal! Main reason we =
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> product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold =
> in USA, Canada and Mexico (legally)."
>
>
> : 3 Are you talking about wireless internet and data services ?
> Our core business is commercial and industrial and we took this proven =
> and accepted OEM SS Transceiver Module and developed a line of ISP and =
> Ethernet products.
>
> I am doing some neat things at home with some of our products... in the =
> event my home ISP is monitoring this server. just expermenting when I =
> tell this... "I have ADSL @ home & sending a full connection to/from =
> daugher & son-in-law a mile away! By bridging my LAN at home with their =
> LAN at their home!" Using a router so the ISP only sees one IP! (Also =
> provides the firewall I need for security.)
>
> I hope the group does not object to any response such as this because I =
> do not want to convert a 'ham radio oriented' list server into a =
> commercial venture... however, I have a ball dealing in the SS world. =
> Its fun!
>
> :=20
> : thanking you
> : yours sincerely

> :=20
> :=20
> :=20
> : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
> <ss@lists.tapr.org>
> : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : >Subject: [ss] Re: Right Direction
> : >Date: Thu, 13 Jul 2000 16:22:39 -0400
> : >MIME-Version: 1.0
> : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id=20
> : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
> : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
> : >Return-Path: <PMcinnish@digiwrls.com>
> : >Message-ID:=20
> : =
> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
> org>
> : >References:=20
> : =
> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
> pr.org>
> : >Organization: Digital Wireless Corporation
> : >X-Priority: 3
> : >X-MSMail-Priority: Normal
> : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
> : >X-MDaemon-Deliver-To: ss@lists.tapr.org
> : >X-Return-Path: pmcinnish@digiwrls.com
> : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> : >List-Software: Lyris Server version 3.0
> : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> : >List-Owner: <mailto:owner-ss@lists.tapr.org>
> : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
> : >Sender: bounce-ss-17222@lists.tapr.org
> : >Precedence: bulk
> : >
> : >Yep... NOT SS and range is limited to just a few feet!
> : >
> : >Also, their choice of the 900 MHz ISM band is a horrible mistake... =
> QRM,
> : >QRN, and all the intermod generated that falls into this band is =
> unreal!
> : >Main reason we discontinued all products in 900 MHz ISM band and went =
> to=20
> : >2.4
> : >GHz ISM band... also allows us to ship world wide (very high =
> acceptance of
> : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be =
> sold in
> : >USA, Canada and Mexico (legally).
> : >
> : >73,
> : >
> : >Paul McInnish - K4BET
> : >Manager, Business Development
> : >Digital Wireless Corp.
> : >One Meca Way
> : >Norcross, GA 30093, USA
> : >Pho: 770.564.5540, Ext. 2342
> : >Fax: 770.564.5541
> : >Cellular Phone: 678.429.2124
> : >OEM E-mail: k4bet@digital-wireless.com
> : >http://www.digital-wireless.com
> : >SSuRFnet E-mail: k4bet@ssurfnet.com
> : >http://www.ssurfnet.com
> : >
> : >Visit with us at ISA Expo 2000!
> : >Booth 1843
> : >21 - 24 August, 2000
> : >New Orleans, LA USA
> : >http://www.isa.org/events/
> : >
> : >----- Original Message -----
> : >From: "William C. Hast" <wchast@utilpart.com>
> : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : >Sent: Thursday, July 13, 2000 2:46 PM
> : >Subject: [ss] Right Direction
> : >

> : >
> : >: Folks:
> : >: These guys are going the right direction, the just
> : >: need to put in a real SS RF deck.
> : >:
> : >: Go take a look at it and see what you think.
> : >:
> : >: http://www.cybiko.com/
> : >:
> : >: I think that they have the right concept. They
> : >: just need to do a bit of work on it.
> : >:
> : >: ---
> : >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> : >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >:
> : >:
> : >
> : >
> : >
> : >---
> : >You are currently subscribed to ss as: venumadhavj@hotmail.com
> : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >
> :=20
> : =
> ____
> : Get Your Private, Free E-mail from MSN Hotmail at =
> http://www.hotmail.com
> :=20
> :=20
> : ---
> : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> :=20
> :=20
>
> ------=_NextPart_000_04CC_01BFED85.B40939C0
> Content-Type: text/html;
>   charset="Windows-1252"
> Content-Transfer-Encoding: quoted-printable
>
> <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
> <HTML><HEAD>
> <META content=3D"text/html; charset=3Dwindows-1252" =
> http-equiv=3DContent-Type>
> <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
> <STYLE></STYLE>
> </HEAD>
> <BODY>
> <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
> <DIV> </DIV>
> <DIV><FONT size=3D2>Paul McInnish - K4BET
Manager, Business=20
> Development
Digital Wireless Corp.
One Meca Way
Norcross, GA =
> 30093,=20
> USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular =
> Phone:=20
> 678.429.2124
OEM E-mail: </FONT><A=20
> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> size=3D2>k4bet@digital-wireless.com</FONT></A>
<A=20
> href=3D"http://www.digital-wireless.com"><FONT=20
> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT =
> size=3D2>SSuRFnet=20
> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:k4bet@ssurfnet.com""><FONT=20
> size=3D2>k4bet@ssurfnet.com</FONT></A>
<A =
> href=3D"http://www.ssurfnet.com"><FONT=20
> size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
> <DIV> </DIV>
> <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!
Booth 1843
21 =
> - 24=20
> August, 2000
New Orleans, LA USA
</FONT><A=20
> href=3D"http://www.isa.org/events/"><FONT=20
> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT=20
> size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and much=20
> nicer);
Effective 14 August 2000:</FONT></DIV>
> <DIV> </DIV>
> <DIV><FONT size=3D2>Digital Wireless Corporation
5375 Oakbrook=20
> Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax:=20

> 678.684.2001
</FONT></DIV>
> <DIV><FONT size=3D2>----- Original Message ----- </FONT>
> <DIV><FONT size=3D2>From: "venumadhav josyula" <</FONT><A=20
> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
> size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
> size=3D2>></FONT></DIV>
> <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest Group"=20
> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&
quot;mailto:ss@lists.tapr.org""><FONT=20
> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>></FONT></DIV>
> <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
> <DIV><FONT size=3D2>Subject: [ss] Re: Right Direction</FONT></DIV></DIV>
> <DIV>
</DIV>
> <DIV><FONT size=3D2>: hey paul,
: <BR>: I am student doing my masters =
> in ee, my=20
> area of specilization is ss and <BR>: datacommunications.
: <BR>:=20
> 1   you say all the intermod that is generated in this band is =
>
> unreal
: why is this?</FONT></DIV>
> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd. and =
> 4th. order=20
> harmonics from paging systems, two-way radio systems, TV stations, =
> microwave=20
> ovens, etc. We have taken (usually in larger metro areas, a =
> spectrum=20
> analyzer and taken a look at 900 MHz ISM band... and the display =
> looks like=20
> a "Prarie Grass field in a 50 mile per hour wind and majority of the =
> 'jamming'=20
> signals are very high in amplitude. No way can critical data =
> applications=20
> tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
> monitoring?=20
> Factory Automation control?</EM></STRONG></FONT></DIV>
> <DIV><FONT size=3D2>
: 2 secondly what is reason of using=20
> 2.4ghz.</FONT></DIV>
> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
> original message:=20
> "QRM, QRN, and all the intermod generated that falls into this band =
> is=20
> unreal! Main reason we discontinued all products in 900 MHz ISM band and =
> went=20
> to 2.4GHz ISM band... also allows us to ship world wide (very high=20
> acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can =
> ONLY be=20
> sold in USA, Canada and Mexico =
> (legally)."
</EM></STRONG></FONT></DIV>
> <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
> internet and data=20
> services ?</FONT></DIV>
> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is =
> commercial and=20
> industrial and we took this proven and accepted OEM SS Transceiver =
> Module=20
> and developed a line of ISP and Ethernet =
> products.</EM></STRONG></FONT></DIV>
> <DIV> </DIV>
> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some neat =
> things at home=20
> with some of our products... in the event my home ISP is monitoring this =
> server.=20
> just expermenting when I tell this... "I have ADSL @ home & sending =
> a full=20
> connection to/from daugher & son-in-law a mile away! By =
> bridging=20
> my LAN at home with their LAN at their home!" Using a router so the ISP =
> only=20
> sees one IP! (Also provides the firewall I need for=20
> security.)</EM></STRONG></FONT></DIV>
> <DIV> </DIV>
> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group does =
> not object=20
> to any response such as this because I do not want to convert a =
> 'ham radio=20
> oriented' list server into a commercial venture... however, I have a =
> ball=20
> dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
> <DIV><FONT size=3D2>
: <BR>: thanking you
: yours sincerely
: =
>
: <BR>:=20

>
: >From: "Paul McInnish" </FONT><A=20
> href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
> size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
> >Reply-To:=20
> "TAPR Spread Spectrum Special Interest Group" </FONT><A=20
> href=3D"mailto:ss@lists.tapr.org"><FONT =
> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
> size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest Group" =
>
> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&
quot;mailto:ss@lists.tapr.org""><FONT=20
> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
> >Subject: [ss] Re:=20
> Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
:=20
> >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
> hotmail.com=20
> (3.2) with ESMTP id <BR>: >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; =
> Thu Jul=20
> 13 13:26:12 2000
: >From </FONT><A=20
> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2> Thu =
> Jul 13=20
> 13:28:28 2000
: >Return-Path: </FONT><A=20
> href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
> size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
> >Message-ID:=20
>
: ></FONT><A=20
> href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
> m@lists.tapr.org"><FONT=20
> size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
> s.tapr.org</FONT></A><FONT=20
> size=3D2>>
: >References: <BR>: ></FONT><A=20
> href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
> .com@lists.tapr.org"><FONT=20
> size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
> ists.tapr.org</FONT></A><FONT=20
> size=3D2>>
: >Organization: Digital Wireless Corporation
:=20
> >X-Priority: 3
: >X-MSMail-Priority: Normal
: >X-MimeOLE: =
>
> Produced By Microsoft MimeOLE V5.50.4133.2400
: =
> >X-MDaemon-Deliver-To:=20
> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&quot
;mailto:ss@lists.tapr.org""><FONT=20
> size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> >X-Return-Path:=20
> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&quot
;mailto:pmcinnish@digiwrls.com""><FONT=20
> size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
> >List-Unsubscribe:=20
> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&
quot;mailto:leave-ss-6751T@lists.tapr.org""><FONT=20
> size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
> size=3D2>>
:=20
> >List-Software: Lyris Server version 3.0
: >List-Subscribe:=20
> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&
quot;mailto:subscribe-ss@lists.tapr.org""><FONT=20
> size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
> size=3D2>>
:=20
> >List-Owner: </FONT><A =
> href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
> size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
> size=3D2>>
:=20
> >X-List-Host: Tucson Amateur Packet Radio </FONT><A=20
> href=3D"http://www.tapr.org"><FONT =
> size=3D2>http://www.tapr.org</FONT></A><FONT=20
> size=3D2>>
: >X-Message-Id:=20
> <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: =
> </FONT><A=20
> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT size=3D2>:=20
> >Precedence: bulk
: >
: >Yep... NOT SS and range is =
> limited to=20
> just a few feet!
: >
: >Also, their choice of the 900 MHz =
> ISM band=20
> is a horrible mistake... QRM,
: >QRN, and all the intermod =
> generated that=20
> falls into this band is unreal!
: >Main reason we discontinued all =
>
> products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz ISM =

> band...=20
> also allows us to ship world wide (very high acceptance of
: =
> >product line=20
> now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
> >USA,=20
> Canada and Mexico (legally).
: >
: >73,
: >
: =
> >Paul=20
> McInnish - K4BET
: >Manager, Business Development
: >Digital =
>
> Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
> USA
:=20
> >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
> >Cellular=20
> Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
> ></FONT><A=20
> href=3D"http://www.digital-wireless.com"><FONT=20
> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT size=3D2>: =
> >SSuRFnet=20
> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:k4bet@ssurfnet.com""><FONT=20
> size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>: ></FONT><A =
>
> href=3D"http://www.ssurfnet.com"><FONT=20
> size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
> >
: >Visit=20
> with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August, =
> 2000
:=20
> >New Orleans, LA USA
: ></FONT><A=20
> href=3D"http://www.isa.org/events/"><FONT=20
> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
> >
:=20
> >----- Original Message -----
: >From: "William C. Hast" =
> </FONT><A=20
> href=3D"mailto:wchast@utilpart.com"><FONT=20
> size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
: >To: =
> "TAPR Spread=20
> Spectrum Special Interest Group" </FONT><A=20
> href=3D"mailto:ss@lists.tapr.org"><FONT =
> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
> size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
> >Subject:=20
> [ss] Right Direction
: >
: >
: >: Folks:
: >: =
> These guys=20
> are going the right direction, the just
: >: need to put in a real =
> SS RF=20
> deck.
: >:
: >: Go take a look at it and see what you =
> think.
:=20
> >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mai
l_archive/3D"http://www.cybiko.com/""><FONT=20
> size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
> >:
: >: I=20
> think that they have the right concept. They
: >: just need to do =
> a bit of=20
> work on it.
: >:
: >: ---
: >: You are currently =
> subscribed to=20
> ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:k4bet@digital-wireless.com""><FONT=20
> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: >: =
> To=20
> unsubscribe send a blank email to </FONT><A=20
> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> >:
:=20
> >:
: >
: >
: >
: >---
: >You are =
> currently=20
> subscribed to ss as: </FONT><A =
> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
> size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>: >To =
> unsubscribe=20
> send a blank email to </FONT><A=20
> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> >
:=20
>
:=20
> _____<=
> BR>:=20
> Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20

> href=3D"http://www.hotmail.com"><FONT=20
> size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>: =
>
: ---
:=20
> You are currently subscribed to ss as: </FONT><A=20
> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: To =
> unsubscribe=20
> send a blank email to </FONT><A=20
> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
>
:=20
> </FONT></DIV></BODY></HTML>
>
> ------=_NextPart_000_04CC_01BFED85.B40939C0--
>
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] Re: ss digest: July 14, 2000

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Sun, 16 Jul 2000 01:31:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-96809-2000.07.16-00.36.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I live in Tampa, and have looked at the 900 Mhz band, there is
some trash, but it is not that bad. I have some 900 MHz data links
on there, these are old discrete channel devices, seem to work
no problem too. Guess depending on your area your milage
may vary.

On Sat, 15 Jul 2000 20:43:36 -0400 (EDT), Jim Ussailis wrote:

>Something I don't understand regarding intermod in the 900 MHz ISM band...
>
>Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and up.
>I don't doubt about the harmonics from TV stations in metro areas, but...
>
>I listed to the 900 MHz band almost daily, and hear nothing, or see
>nothing on the analyser. Of course I am in a rural area.
>
>We do have several pagers around 931. The rest of it is very quiet.
>
>
>Jim Ussailis, W1EQO
>
>National Wireless, Inc
>
>
>On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group digest wrote:
>
>> TAPR Spread Spectrum Special Interest Group Digest for Friday, July 14, 2000.
>>
>> 1. Re: Right Direction
>> 2. Re: Right Direction
>> 3. Re: Right Direction
>> 4. Re: Right Direction
>> 5. Re: Right Direction
>>
>> --
>>
>> Subject: Re: Right Direction
>> From: Derek Lassen <kn6td@clubnet.net>

>> Date: Fri, 14 Jul 2000 01:51:40 -0700
>> X-Message-Number: 1
>>
>> Anybody get one yet?
>> What's the processor?
>>
>> I wonder if there is a market for a game server / range extender (small
>> enough to stay in the backpack).
>>
>> :>
>>
>> (s) Derek
>>
>> At 10:03 PM 7/13/00 -0600, you wrote:
>> >I hate to rain on your parade, but going in the right direction for
>> >what? Wireless chat at 150'? If the person's that close I'll get up and
>> >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
>> >Palm. Internet? screen's kind of small ain't it? Games? I wish I had the
>> >time. Friend finder? Maybe it'll come in handy at the next Rolling
>> >Stones Concert. This is a toy if I've ever seen one. Maybe something fun
>> >for the kids. I can't imagine what I'd use it for. Someone obviously
>> >disagrees with me and has put beaucoup bucks into it to be able to sell
>> >the thing for $129. Maybe I'll get one for my kid for xmas.
>> >
>> >bah humbug
>> >
>> >--Dave
>> >
>> >"William C. Hast" wrote:
>> >
>> > > Folks:
>> > > These guys are going the right direction, the just
>> > > need to put in a real SS RF deck.
>> > >
>> > > Go take a look at it and see what you think.
>> > >
>> > > http://www.cybiko.com/
>> > >
>> > > I think that they have the right concept. They
>> > > just need to do a bit of work on it.
>> > >
>> > > ---
>> > > You are currently subscribed to ss as: depagnier@uswest.net
>> > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> >
>> >
>> >---
>> >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>>
>>
>>
>> --
>>
>> Subject: Re: Right Direction
>> From: Derek Lassen <kn6td@clubnet.net>
>> Date: Fri, 14 Jul 2000 01:59:33 -0700
>> X-Message-Number: 2
>>
>> I just looked at the web site - I shoulda RTFM. Sorry.
>>
>> Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
>> seems to have a compact flash.
>>
>> RF communications is via 19k on 915 MHz GMSK.
>>
>> 73 de KN6TD
>>
>> (s) Derek
>>
>> At 01:51 AM 7/14/00 -0700, you wrote:
>> >Anybody get one yet?
>> >What's the processor?
>> >
>> >I wonder if there is a market for a game server / range extender (small
>> >enough to stay in the backpack).
>> >
>> >:>
>> >

>> >(s) Derek
>> >
>> >At 10:03 PM 7/13/00 -0600, you wrote:
>> >>I hate to rain on your parade, but going in the right direction for
>> >>what? Wireless chat at 150'? If the person's that close I'll get up and
>> >>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
>> >>Palm. Internet? screen's kind of small ain't it? Games? I wish I had the
>> >>time. Friend finder? Maybe it'll come in handy at the next Rolling
>> >>Stones Concert. This is a toy if I've ever seen one. Maybe something fun
>> >>for the kids. I can't imagine what I'd use it for. Someone obviously
>> >>disagrees with me and has put beaucoup bucks into it to be able to sell
>> >>the thing for $129. Maybe I'll get one for my kid for xmas.
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>> >>bah humbug
>> >>
>> >>--Dave
>> >>
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>> >> >
>> >> > I think that they have the right concept. They
>> >> > just need to do a bit of work on it.
>> >> >
>> >> > ---
>> >> > You are currently subscribed to ss as: depagnier@uswest.net
>> >> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>>
>>
>>
>> --
>>
>> Subject: Re: Right Direction
>> From: "venumadhav josyula" <venumadhavj@hotmail.com>
>> Date: Fri, 14 Jul 2000 04:33:31 PDT
>> X-Message-Number: 3
>>
>> hey paul,
>>
>> I am student doing my masters in ee, my area of specilization is ss and
>> datacommunications.
>>
>> 1   you say all the intermod that is generated in this band is unreal
>> why is this?
>> 2 secondly what is reason of using 2.4ghz.
>> 3 Are you talking about wireless internet and data services ?
>>
>> thanking you
>> yours sincerely
>>
>>
>>
>> >From: "Paul McInnish" <pmcinnish@digiwrls.com>
>> >Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>> >Subject: [ss] Re: Right Direction
>> >Date: Thu, 13 Jul 2000 16:22:39 -0400
>> >MIME-Version: 1.0
>> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
>> >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
>> >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
>> >Return-Path: <PMcinnish@digiwrls.com>
>> >Message-ID:
>> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org>
>> >References:
>> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.org>
>> >Organization: Digital Wireless Corporation
>> >X-Priority: 3
>> >X-MSMail-Priority: Normal
>> >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
>> >X-MDaemon-Deliver-To: ss@lists.tapr.org
>> >X-Return-Path: pmcinnish@digiwrls.com
>> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>

>> >List-Software: Lyris Server version 3.0
>> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
>> >List-Owner: <mailto:owner-ss@lists.tapr.org>
>> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
>> >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
>> >Sender: bounce-ss-17222@lists.tapr.org
>> >Precedence: bulk
>> >
>> >Yep... NOT SS and range is limited to just a few feet!
>> >
>> >Also, their choice of the 900 MHz ISM band is a horrible mistake... QRM,
>> >QRN, and all the intermod generated that falls into this band is unreal!
>> >Main reason we discontinued all products in 900 MHz ISM band and went to
>> >2.4
>> >GHz ISM band... also allows us to ship world wide (very high acceptance of
>> >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
>> >USA, Canada and Mexico (legally).
>> >
>> >73,
>> >
>> >Paul McInnish - K4BET
>> >Manager, Business Development
>> >Digital Wireless Corp.
>> >One Meca Way
>> >Norcross, GA 30093, USA
>> >Pho: 770.564.5540, Ext. 2342
>> >Fax: 770.564.5541
>> >Cellular Phone: 678.429.2124
>> >OEM E-mail: k4bet@digital-wireless.com
>> >http://www.digital-wireless.com
>> >SSuRFnet E-mail: k4bet@ssurfnet.com
>> >http://www.ssurfnet.com
>> >
>> >Visit with us at ISA Expo 2000!
>> >Booth 1843
>> >21 - 24 August, 2000
>> >New Orleans, LA USA
>> >http://www.isa.org/events/
>> >
>> >----- Original Message -----
>> >From: "William C. Hast" <wchast@utilpart.com>
>> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>> >Sent: Thursday, July 13, 2000 2:46 PM
>> >Subject: [ss] Right Direction
>> >
>> >
>> >: Folks:
>> >: These guys are going the right direction, the just
>> >: need to put in a real SS RF deck.
>> >:
>> >: Go take a look at it and see what you think.
>> >:
>> >: http://www.cybiko.com/
>> >:
>> >: I think that they have the right concept. They
>> >: just need to do a bit of work on it.
>> >:
>> >: ---
>> >: You are currently subscribed to ss as: k4bet@digital-wireless.com
>> >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> >:
>> >:
>> >
>> >
>> >
>> >---
>> >You are currently subscribed to ss as: venumadhavj@hotmail.com
>> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> >
>>
>> _____
>> Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
>>
>>
>> --
>>
>> Subject: Re: Right Direction
>> From: "Hast, Chuck" <wchast@utilpart.com>
>> Date: Fri, 14 Jul 2000 07:32:35 -0400

>> X-Message-Number: 4
>>
>> I called them and talked to them. They appear VERY open to
>> ideas and recommendations. Indeed the RF deck is a deck
>> out of a 900 MHz discrete channel phone (as told to me by
>> them) there are 30 selectable channels and according to the
>> propaganda each channel can support up to 100 interconnected
>> users.
>>
>> For those who do not think much of it, I guess it ain't much but
>> like my grandmomma said one day, "wish in one hand and spit
>> in the other and see which fills the fastest", some times I think
>> we do a lot of wishing and not enough spittin', so here we
>> stand empty handed, and some company out there is bringing
>> out the beginnings of the box we have been wishing for.
>>
>> In talking to them they sounded like the would like to develop
>> a device and a network concept that would be like the ricochet
>> system, or a cell like system, but they were VERY open to
>> ideas and recommendations.
>>
>> They also want to do voice, but do not handle it yet. I believe
>> the sound part is all there it is probably a software issue.
>>
>> I will repeat my self again, if we want to get some volume on
>> these things we are going to have to get the volume radio users
>> (voice users) involved, or I fear we will continue to spend a lot
>> of time wishing. I totally favor a data world, but reality is that
>> the world is a voice world, and the best way to get volume is
>> to convert that voice into a data stream and then do neat magic
>> with it that will make the voice users want to get on your system,
>> pay the (insert monetary unit here) to do so and keep from draining
>> YOUR pocket so much.
>>
>> Yes this box is crude and rude but, it is a start. I can probably do
>> better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
>> some software in there to handle the voice part and a access point
>> well place on top of my building to use it a few hundred yards from
>> the building, but the cost is now up there at over 1K USD.
>>
>> If they can keep the cost on this down near where it is now, and
>> still field a SS device that can work through a hub or SS repeater,
>> and carry a bit of power behind it (up to the 1 watt part 15 max)
>> then they are really going the right direction for the volume user.
>>
>> Go out and look at the web site, give them a call, or a e-mail and
>> see what you make of it.
>>
>>
>>
>>
>> --
>>
>> Subject: Re: Right Direction
>> From: "Paul McInnish" <pmcinnish@digiwrls.com>
>> Date: Fri, 14 Jul 2000 11:21:49 -0400
>> X-Message-Number: 5
>>
>> This is a multi-part message in MIME format.
>>
>> ------=_NextPart_000_04CC_01BFED85.B40939C0
>> Content-Type: text/plain;
>>   charset="Windows-1252"
>> Content-Transfer-Encoding: quoted-printable
>>
>> See response embedded below:
>>
>> Paul McInnish - K4BET
>> Manager, Business Development
>> Digital Wireless Corp.
>> One Meca Way
>> Norcross, GA 30093, USA
>> Pho: 770.564.5540, Ext. 2342
>> Fax: 770.564.5541
>> Cellular Phone: 678.429.2124
>> OEM E-mail: k4bet@digital-wireless.com
>> http://www.digital-wireless.com
>> SSuRFnet E-mail: k4bet@ssurfnet.com
>> http://www.ssurfnet.com

>>
>> Visit with us at ISA Expo 2000!
>> Booth 1843
>> 21 - 24 August, 2000
>> New Orleans, LA USA
>> http://www.isa.org/events/
>> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
>> New address (bigger and much nicer);
>> Effective 14 August 2000:
>>
>> Digital Wireless Corporation
>> 5375 Oakbrook Parkway
>> Norcross, GA 30093 USA
>> Pho: 678.684.2000
>> Fax: 678.684.2001
>>
>> ----- Original Message -----=20
>> From: "venumadhav josyula" <venumadhavj@hotmail.com>
>> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>> Sent: Friday, July 14, 2000 7:33 AM
>> Subject: [ss] Re: Right Direction
>>
>>
>> : hey paul,
>> :=20
>> : I am student doing my masters in ee, my area of specilization is ss =
>> and=20
>> : datacommunications.
>> :=20
>> : 1   you say all the intermod that is generated in this band is unreal =
>>   =20
>> : why is this?
>> It is 2nd., 3rd. and 4th. order harmonics from paging systems, two-way =
>> radio systems, TV stations, microwave ovens, etc. We have taken =
>> (usually in larger metro areas, a spectrum analyzer and taken a look at =
>> 900 MHz ISM band... and the display looks like a "Prarie Grass field in =
>> a 50 mile per hour wind and majority of the 'jamming' signals are very =
>> high in amplitude. No way can critical data applications tolerate this. =
>> Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory =
>> Automation control?
>>
>> : 2 secondly what is reason of using 2.4ghz.
>> As I stated in my original message: "QRM, QRN, and all the intermod =
>> generated that falls into this band is unreal! Main reason we =
>> discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM =
>> band... also allows us to ship world wide (very high acceptance of =
>> product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold =
>> in USA, Canada and Mexico (legally)."
>>
>>
>> : 3 Are you talking about wireless internet and data services ?
>> Our core business is commercial and industrial and we took this proven =
>> and accepted OEM SS Transceiver Module and developed a line of ISP and =
>> Ethernet products.
>>
>> I am doing some neat things at home with some of our products... in the =
>> event my home ISP is monitoring this server. just expermenting when I =
>> tell this... "I have ADSL @ home & sending a full connection to/from =
>> daugher & son-in-law a mile away! By bridging my LAN at home with their =
>> LAN at their home!" Using a router so the ISP only sees one IP! (Also =
>> provides the firewall I need for security.)
>>
>> I hope the group does not object to any response such as this because I =
>> do not want to convert a 'ham radio oriented' list server into a =
>> commercial venture... however, I have a ball dealing in the SS world. =
>> Its fun!
>>
>> :=20
>> : thanking you
>> : yours sincerely
>> :=20
>> :=20
>> :=20
>> : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
>> : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
>> <ss@lists.tapr.org>
>> : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>> : >Subject: [ss] Re: Right Direction
>> : >Date: Thu, 13 Jul 2000 16:22:39 -0400

>> : >MIME-Version: 1.0
>> : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id=20
>> : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
>> : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
>> : >Return-Path: <PMcinnish@digiwrls.com>
>> : >Message-ID:=20
>> : =
>> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
>> org>
>> : >References:=20
>> : =
>> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
>> pr.org>
>> : >Organization: Digital Wireless Corporation
>> : >X-Priority: 3
>> : >X-MSMail-Priority: Normal
>> : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
>> : >X-MDaemon-Deliver-To: ss@lists.tapr.org
>> : >X-Return-Path: pmcinnish@digiwrls.com
>> : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
>> : >List-Software: Lyris Server version 3.0
>> : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
>> : >List-Owner: <mailto:owner-ss@lists.tapr.org>
>> : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
>> : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
>> : >Sender: bounce-ss-17222@lists.tapr.org
>> : >Precedence: bulk
>> : >
>> : >Yep... NOT SS and range is limited to just a few feet!
>> : >
>> : >Also, their choice of the 900 MHz ISM band is a horrible mistake... =
>> QRM,
>> : >QRN, and all the intermod generated that falls into this band is =
>> unreal!
>> : >Main reason we discontinued all products in 900 MHz ISM band and went =
>> to=20
>> : >2.4
>> : >GHz ISM band... also allows us to ship world wide (very high =
>> acceptance of
>> : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be =
>> sold in
>> : >USA, Canada and Mexico (legally).
>> : >
>> : >73,
>> : >
>> : >Paul McInnish - K4BET
>> : >Manager, Business Development
>> : >Digital Wireless Corp.
>> : >One Meca Way
>> : >Norcross, GA 30093, USA
>> : >Pho: 770.564.5540, Ext. 2342
>> : >Fax: 770.564.5541
>> : >Cellular Phone: 678.429.2124
>> : >OEM E-mail: k4bet@digital-wireless.com
>> : >http://www.digital-wireless.com
>> : >SSuRFnet E-mail: k4bet@ssurfnet.com
>> : >http://www.ssurfnet.com
>> : >
>> : >Visit with us at ISA Expo 2000!
>> : >Booth 1843
>> : >21 - 24 August, 2000
>> : >New Orleans, LA USA
>> : >http://www.isa.org/events/
>> : >
>> : >----- Original Message -----
>> : >From: "William C. Hast" <wchast@utilpart.com>
>> : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>> : >Sent: Thursday, July 13, 2000 2:46 PM
>> : >Subject: [ss] Right Direction
>> : >
>> : >
>> : >: Folks:
>> : >: These guys are going the right direction, the just
>> : >: need to put in a real SS RF deck.
>> : >:
>> : >: Go take a look at it and see what you think.
>> : >:
>> : >: http://www.cybiko.com/
>> : >:

```
>> : >: I think that they have the right concept. They
>> : >: just need to do a bit of work on it.
>> : >:
>> : >: ---
>> : >: You are currently subscribed to ss as: k4bet@digital-wireless.com
>> : >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> : >:
>> : >:
>> : >
>> : >
>> : >
>> : >---
>> : >You are currently subscribed to ss as: venumadhavj@hotmail.com
>> : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> : >
>> :=20
>> : =
>> _________________________________________________________________
>> : Get Your Private, Free E-mail from MSN Hotmail at =
>> http://www.hotmail.com
>> :=20
>> :=20
>> : ---
>> : You are currently subscribed to ss as: k4bet@digital-wireless.com
>> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> :=20
>> :=20
>>
>> ------=_NextPart_000_04CC_01BFED85.B40939C0
>> Content-Type: text/html;
>>      charset="Windows-1252"
>> Content-Transfer-Encoding: quoted-printable
>>
>> <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
>> <HTML><HEAD>
>> <META content=3D"text/html; charset=3Dwindows-1252" =
>> http-equiv=3DContent-Type>
>> <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
>> <STYLE></STYLE>
>> </HEAD>
>> <BODY>
>> <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
>> <DIV> </DIV>
>> <DIV><FONT size=3D2>Paul McInnish - K4BET<BR>Manager, Business=20
>> Development<BR>Digital Wireless Corp.<BR>One Meca Way<BR>Norcross, GA =
>> 30093,=20
>> USA<BR>Pho: 770.564.5540, Ext. 2342<BR>Fax: 770.564.5541<BR>Cellular =
>> Phone:=20
>> 678.429.2124<BR>OEM E-mail: </FONT><A=20
>> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
>> size=3D2>k4bet@digital-wireless.com</FONT></A><BR><A=20
>> href=3D"http://www.digital-wireless.com"><FONT=20
>> size=3D2>http://www.digital-wireless.com</FONT></A><BR><FONT =
>> size=3D2>SSuRFnet=20
>> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D&amp;quot;mailto:k4bet@ssurfnet.com&amp;quot;"><FONT=20
>> size=3D2>k4bet@ssurfnet.com</FONT></A><BR><A =
>> href=3D"http://www.ssurfnet.com"><FONT=20
>> size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
>> <DIV> </DIV>
>> <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!<BR>Booth 1843<BR>21 =
>> - 24=20
>> August, 2000<BR>New Orleans, LA USA<BR></FONT><A=20
>> href=3D"http://www.isa.org/events/"><FONT=20
>> size=3D2>http://www.isa.org/events/</FONT></A><BR><FONT=20
>> size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~<BR>New address (bigger and much=20
>> nicer);<BR>Effective 14 August 2000:</FONT></DIV>
>> <DIV> </DIV>
>> <DIV><FONT size=3D2>Digital Wireless Corporation<BR>5375 Oakbrook=20
>> Parkway<BR>Norcross, GA 30093 USA<BR>Pho: 678.684.2000<BR>Fax:=20
>> 678.684.2001<BR></FONT></DIV>
>> <DIV><FONT size=3D2>----- Original Message ----- </FONT>
>> <DIV><FONT size=3D2>From: "venumadhav josyula" &amp;lt;</FONT><A=20
>> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
>> size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
>> size=3D2>&amp;gt;</FONT></DIV>
>> <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest Group"=20
>> &amp;lt;</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D
&amp;quot;mailto:ss@lists.tapr.org&amp;quot;"><FONT=20
```

>> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>></FONT></DIV>
>> <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
>> <DIV><FONT size=3D2>Subject: [ss] Re: Right Direction</FONT></DIV></DIV>
>> <DIV>
</DIV>
>> <DIV><FONT size=3D2>: hey paul,
: <BR>: I am student doing my masters =
>> in ee, my=20
>> area of specilization is ss and <BR>: datacommunications.
: <BR>:=20
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>>
>> unreal
: why is this?</FONT></DIV>
>> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd. and =
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>> harmonics from paging systems, two-way radio systems, TV stations, =
>> microwave=20
>> ovens, etc. We have taken (usually in larger metro areas, a =
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>> analyzer and taken a look at 900 MHz ISM band... and the display =
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>> a "Prarie Grass field in a 50 mile per hour wind and majority of the =
>> 'jamming'=20
>> signals are very high in amplitude. No way can critical data =
>> applications=20
>> tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
>> monitoring?=20
>> Factory Automation control?</EM></STRONG></FONT></DIV>
>> <DIV><FONT size=3D2>
: 2 secondly what is reason of using=20
>> 2.4ghz.</FONT></DIV>
>> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
>> original message:=20
>> "QRM, QRN, and all the intermod generated that falls into this band =
>> is=20
>> unreal! Main reason we discontinued all products in 900 MHz ISM band and =
>> went=20
>> to 2.4GHz ISM band... also allows us to ship world wide (very high=20
>> acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can =
>> ONLY be=20
>> sold in USA, Canada and Mexico =
>> (legally)."
</EM></STRONG></FONT></DIV>
>> <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
>> internet and data=20
>> services ?</FONT></DIV>
>> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is =
>> commercial and=20
>> industrial and we took this proven and accepted OEM SS Transceiver =
>> Module=20
>> and developed a line of ISP and Ethernet =
>> products.</EM></STRONG></FONT></DIV>
>> <DIV> </DIV>
>> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some neat =
>> things at home=20
>> with some of our products... in the event my home ISP is monitoring this =
>> server.=20
>> just expermenting when I tell this... "I have ADSL @ home & sending =
>> a full=20
>> connection to/from daugher & son-in-law a mile away! By =
>> bridging=20
>> my LAN at home with their LAN at their home!" Using a router so the ISP =
>> only=20
>> sees one IP! (Also provides the firewall I need for=20
>> security.)</EM></STRONG></FONT></DIV>
>> <DIV> </DIV>
>> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group does =
>> not object=20
>> to any response such as this because I do not want to convert a =
>> 'ham radio=20
>> oriented' list server into a commercial venture... however, I have a =
>> ball=20
>> dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
>> <DIV><FONT size=3D2>
: <BR>: thanking you
: yours sincerely
: =
>>
: <BR>:=20
>>
: >From: "Paul McInnish" <</FONT><A=20
>> href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
>> size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
>> >Reply-To:=20
>> "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
>> href=3D"mailto:ss@lists.tapr.org"><FONT =
>> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
>> size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest Group" =
>>

>> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D
"mailto:ss@lists.tapr.org""><FONT=20
>> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
>> >Subject: [ss] Re:=20
>> Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
:=20
>> >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
>> hotmail.com=20
>> (3.2) with ESMTP id <BR>: >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; =
>> Thu Jul=20
>> 13 13:26:12 2000
: >From </FONT><A=20
>> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
>> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2> Thu =
>> Jul 13=20
>> 13:28:28 2000
: >Return-Path: <</FONT><A=20
>> href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
>> size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
>> >Message-ID:=20
>>
: ><</FONT><A=20
>> href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
>> m@lists.tapr.org"><FONT=20
>> size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
>> s.tapr.org</FONT></A><FONT=20
>> size=3D2>>
: >References: <BR>: ><</FONT><A=20
>> href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
>> .com@lists.tapr.org"><FONT=20
>> size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
>> ists.tapr.org</FONT></A><FONT=20
>> size=3D2>>
: >Organization: Digital Wireless Corporation
:=20
>> >X-Priority: 3
: >X-MSMail-Priority: Normal
: >X-MimeOLE: =
>>
>> Produced By Microsoft MimeOLE V5.50.4133.2400
: =
>> >X-MDaemon-Deliver-To:=20
>> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&quo
t;mailto:ss@lists.tapr.org""><FONT=20
>> size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
>> >X-Return-Path:=20
>> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&quo
t;mailto:pmcinnish@digiwrls.com""><FONT=20
>> size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
>> >List-Unsubscribe:=20
>> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D
"mailto:leave-ss-6751T@lists.tapr.org""><FONT=20
>> size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
>> size=3D2>>
:=20
>> >List-Software: Lyris Server version 3.0
: >List-Subscribe:=20
>> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D
"mailto:subscribe-ss@lists.tapr.org""><FONT=20
>> size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
>> size=3D2>>
:=20
>> >List-Owner: <</FONT><A =
>> href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
>> size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
>> size=3D2>>
:=20
>> >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20
>> href=3D"http://www.tapr.org"><FONT =
>> size=3D2>http://www.tapr.org</FONT></A><FONT=20
>> size=3D2>>
: >X-Message-Id:=20
>> <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: =
>> </FONT><A=20
>> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
>> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT size=3D2>:=20
>> >Precedence: bulk
: >
: >Yep... NOT SS and range is =
>> limited to=20
>> just a few feet!
: >
: >Also, their choice of the 900 MHz =
>> ISM band=20
>> is a horrible mistake... QRM,
: >QRN, and all the intermod =
>> generated that=20
>> falls into this band is unreal!
: >Main reason we discontinued all =
>>
>> products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz ISM =
>> band...=20
>> also allows us to ship world wide (very high acceptance of
: =
>> >product line=20
>> now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
>> >USA,=20
>> Canada and Mexico (legally).
: >
: >73,
: >
: =
>> >Paul=20
>> McInnish - K4BET
: >Manager, Business Development
: >Digital =
>>

>> Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
>> USA
:=20
>> >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
>> >Cellular=20
>> Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
>> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
>> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
>> ></FONT><A=20
>> href=3D"http://www.digital-wireless.com"><FONT=20
>> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT size=3D2>: =
>> >SSuRFnet=20
>> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D"mailto:k4bet@ssurfnet.com""><FONT=20
>> size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>: ></FONT><A =
>>
>> href=3D"http://www.ssurfnet.com"><FONT=20
>> size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
>> >
: >Visit=20
>> with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August, =
>> 2000
:=20
>> >New Orleans, LA USA
: ></FONT><A=20
>> href=3D"http://www.isa.org/events/"><FONT=20
>> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
>> >
:=20
>> >----- Original Message -----
: >From: "William C. Hast" =
>> <</FONT><A=20
>> href=3D"mailto:wchast@utilpart.com"><FONT=20
>> size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
: >To: =
>> "TAPR Spread=20
>> Spectrum Special Interest Group" <</FONT><A=20
>> href=3D"mailto:ss@lists.tapr.org"><FONT =
>> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
>> size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
>> >Subject:=20
>> [ss] Right Direction
: >
: >
: >: Folks:
: >: =
>> These guys=20
>> are going the right direction, the just
: >: need to put in a real =
>> SS RF=20
>> deck.
: >:
: >: Go take a look at it and see what you =
>> think.
:=20
>> >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/ma
il_archive/3D"http://www.cybiko.com/""><FONT=20
>> size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
>> >:
: >: I=20
>> think that they have the right concept. They
: >: just need to do =
>> a bit of=20
>> work on it.
: >:
: >: ---
: >: You are currently =
>> subscribed to=20
>> ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:k4bet@digital-wireless.com""><FONT=20
>> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: >: =
>> To=20
>> unsubscribe send a blank email to </FONT><A=20
>> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
>> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
>> >:
:=20
>> >:
: >
: >
: >
: >---
: >You are =
>> currently=20
>> subscribed to ss as: </FONT><A =
>> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
>> size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>: >To =
>> unsubscribe=20
>> send a blank email to </FONT><A=20
>> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
>> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
>> >
:=20
>>
:=20
>> _____<=
>> BR>:=20
>> Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
>> href=3D"http://www.hotmail.com"><FONT=20
>> size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>: =
>>
: ---
:=20
>> You are currently subscribed to ss as: </FONT><A=20
>> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
>> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: To =
>> unsubscribe=20
>> send a blank email to </FONT><A=20
>> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20

>> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
>>
:=20
>> </FONT></DIV></BODY></HTML>
>>
>> ------=_NextPart_000_04CC_01BFED85.B40939C0--
>>
>>
>>
>>
>>
>> ---
>>
>> END OF DIGEST
>>
>> ---
>> You are currently subscribed to ss as: ussailis@shaysnet.com
>> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>>
>>
>
>---
>You are currently subscribed to ss as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

34. [ss] Re: ss digest: July 14, 2000

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 17 Jul 2000 09:16:34 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-97047-2000.07.17-08.24.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Nope... not true in the DIGITAL spread spectrum world! A small amount of crud can cause havoc! Assume one is using a frequency hopping digital spread spectrum transceiver sending/receiving life support monitoring data... the throughput can be severely slowed down as the transceiver makes every effort to receive all the data and with all the error checking the transceiver is having to do... well, I sure would not want that!

Or you are controlling several dozen fully automated robotic production lines... some dropped data, some erred data... some flawed data... the robotics either shuts down, goes havoc, etc., etc.....

Critical digital data cannot tolerate trash! Even small amounts! And some speed requirements are also critical! Noise, interference & jamming slows the digital system down, dramatically. As I previously stated... the reasons we chose to get out of the 900 MHz ISM band is precisely because of all the noise & interference... even @ 2.4GHZ it is there but we control that with DSP, hard filtering, soft filtering, very sharp band skirts, etc. AND we can ship product all over the world! 900 MHz is restricted only to USA, Canada & Mexico!

And ad-in-finitium!

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
One Meca Way
Norcross, GA 30093, USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular Phone: 678.429.2124
OEM E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com
SSuRFnet E-mail: k4bet@ssurfnet.com
http://www.ssurfnet.com

Visit with us at ISA Expo 2000!
Booth 1843

21 - 24 August, 2000
New Orleans, LA USA
http://www.isa.org/events/
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and much nicer);
Effective 14 August 2000:

Digital Wireless Corporation
5375 Oakbrook Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax: 678.684.2001

----- Original Message -----
From: "Chuck Hast" <kp4djt@tampabay.rr.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Sunday, July 16, 2000 2:31 AM
Subject: [ss] Re: ss digest: July 14, 2000

: I live in Tampa, and have looked at the 900 Mhz band, there is
: some trash, but it is not that bad. I have some 900 MHz data links
: on there, these are old discrete channel devices, seem to work
: no problem too. Guess depending on your area your milage
: may vary.
:
:
: On Sat, 15 Jul 2000 20:43:36 -0400 (EDT), Jim Ussailis wrote:
:
: >Something I don't understand regarding intermod in the 900 MHz ISM
band...
: >
: >Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and up.
: >I don't doubt about the harmonics from TV stations in metro areas, but...
: >
: >I listed to the 900 MHz band almost daily, and hear nothing, or see
: >nothing on the analyser. Of course I am in a rural area.
: >
: >We do have several pagers around 931. The rest of it is very quiet.
: >
: >
: >Jim Ussailis, W1EQO
: >
: >National Wireless, Inc
: >
: >
: >On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group digest
wrote:
: >
: >> TAPR Spread Spectrum Special Interest Group Digest for Friday, July 14,
2000.
: >>
: >> 1. Re: Right Direction
: >> 2. Re: Right Direction
: >> 3. Re: Right Direction
: >> 4. Re: Right Direction
: >> 5. Re: Right Direction
: >>
: >> --
: >>
: >> Subject: Re: Right Direction
: >> From: Derek Lassen <kn6td@clubnet.net>
: >> Date: Fri, 14 Jul 2000 01:51:40 -0700
: >> X-Message-Number: 1
: >>
: >> Anybody get one yet?
: >> What's the processor?
: >>
: >> I wonder if there is a market for a game server / range extender (small
: >> enough to stay in the backpack).
: >>
: >> :>
: >>
: >> (s) Derek
: >>
: >> At 10:03 PM 7/13/00 -0600, you wrote:
: >> >I hate to rain on your parade, but going in the right direction for
: >> >what? Wireless chat at 150'? If the person's that close I'll get up
and
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

: >> >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
: >> >Palm. Internet? screen's kind of small ain't it? Games? I wish I had
the
: >> >time. Friend finder? Maybe it'll come in handy at the next Rolling
: >> >Stones Concert. This is a toy if I've ever seen one. Maybe something
fun
: >> >for the kids. I can't imagine what I'd use it for. Someone obviously
: >> >disagrees with me and has put beaucoup bucks into it to be able to
sell
: >> >the thing for $129. Maybe I'll get one for my kid for xmas.
: >> >
: >> >bah humbug
: >> >
: >> >--Dave
: >> >
: >> >"William C. Hast" wrote:
: >> >
: >> > > Folks:
: >> > > These guys are going the right direction, the just
: >> > > need to put in a real SS RF deck.
: >> > >
: >> > > Go take a look at it and see what you think.
: >> > >
: >> > > http://www.cybiko.com/
: >> > >
: >> > > I think that they have the right concept. They
: >> > > just need to do a bit of work on it.
: >> > >
: >> > > ---
: >> > > You are currently subscribed to ss as: depagnier@uswest.net
: >> > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >> >
: >> >
: >> >---
: >> >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
: >> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >>
: >>
: >>
: >> --
: >>
: >> Subject: Re: Right Direction
: >> From: Derek Lassen <kn6td@clubnet.net>
: >> Date: Fri, 14 Jul 2000 01:59:33 -0700
: >> X-Message-Number: 2
: >>
: >> I just looked at the web site - I shoulda RTFM. Sorry.
: >>
: >> Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
: >> seems to have a compact flash.
: >>
: >> RF communications is via 19k on 915 MHz GMSK.
: >>
: >> 73 de KN6TD
: >>
: >> (s) Derek
: >>
: >> At 01:51 AM 7/14/00 -0700, you wrote:
: >> >Anybody get one yet?
: >> >What's the processor?
: >> >
: >> >I wonder if there is a market for a game server / range extender
(small
: >> >enough to stay in the backpack).
: >> >
: >> >:>
: >> >
: >> >(s) Derek
: >> >
: >> >At 10:03 PM 7/13/00 -0600, you wrote:
: >> >>I hate to rain on your parade, but going in the right direction for
: >> >>what? Wireless chat at 150'? If the person's that close I'll get up
and
: >> >>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
: >> >>Palm. Internet? screen's kind of small ain't it? Games? I wish I had
the
: >> >>time. Friend finder? Maybe it'll come in handy at the next Rolling
: >> >>Stones Concert. This is a toy if I've ever seen one. Maybe something
fun

: >> >>for the kids. I can't imagine what I'd use it for. Someone obviously
: >> >>disagrees with me and has put beaucoup bucks into it to be able to
sell
: >> >>the thing for $129. Maybe I'll get one for my kid for xmas.
: >> >>
: >> >>bah humbug
: >> >>
: >> >>--Dave
: >> >>
: >> >>"William C. Hast" wrote:
: >> >>
: >> >> > Folks:
: >> >> > These guys are going the right direction, the just
: >> >> > need to put in a real SS RF deck.
: >> >> >
: >> >> > Go take a look at it and see what you think.
: >> >> >
: >> >> > http://www.cybiko.com/
: >> >> >
: >> >> > I think that they have the right concept. They
: >> >> > just need to do a bit of work on it.
: >> >> >
: >> >> > ---
: >> >> > You are currently subscribed to ss as: depagnier@uswest.net
: >> >> > To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: >>
: >>
: >>
: >> --
: >>
: >> Subject: Re: Right Direction
: >> From: "venumadhav josyula" <venumadhavj@hotmail.com>
: >> Date: Fri, 14 Jul 2000 04:33:31 PDT
: >> X-Message-Number: 3
: >>
: >> hey paul,
: >>
: >> I am student doing my masters in ee, my area of specilization is ss and
: >> datacommunications.
: >>
: >> 1   you say all the intermod that is generated in this band is unreal
: >> why is this?
: >> 2 secondly what is reason of using 2.4ghz.
: >> 3 Are you talking about wireless internet and data services ?
: >>
: >> thanking you
: >> yours sincerely
: >>
: >>
: >>
: >> >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: >> >Reply-To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: >> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >> >Subject: [ss] Re: Right Direction
: >> >Date: Thu, 13 Jul 2000 16:22:39 -0400
: >> >MIME-Version: 1.0
: >> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
: >> >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
: >> >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: >> >Return-Path: <PMcinnish@digiwrls.com>
: >> >Message-ID:
: >>
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org
>
: >> >References:
: >>
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.
org>
: >> >Organization: Digital Wireless Corporation
: >> >X-Priority: 3
: >> >X-MSMail-Priority: Normal
: >> >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: >> >X-MDaemon-Deliver-To: ss@lists.tapr.org
: >> >X-Return-Path: pmcinnish@digiwrls.com
: >> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: >> >List-Software: Lyris Server version 3.0
: >> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>

: >> >List-Owner: <mailto:owner-ss@lists.tapr.org>
: >> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: >> >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >> >Sender: bounce-ss-17222@lists.tapr.org
: >> >Precedence: bulk
: >> >
: >> >Yep... NOT SS and range is limited to just a few feet!
: >> >
: >> >Also, their choice of the 900 MHz ISM band is a horrible mistake...
QRM,
: >> >QRN, and all the intermod generated that falls into this band is
unreal!
: >> >Main reason we discontinued all products in 900 MHz ISM band and went
to
: >> >2.4
: >> >GHz ISM band... also allows us to ship world wide (very high
acceptance of
: >> >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold
in
: >> >USA, Canada and Mexico (legally).
: >> >
: >> >73,
: >> >
: >> >Paul McInnish - K4BET
: >> >Manager, Business Development
: >> >Digital Wireless Corp.
: >> >One Meca Way
: >> >Norcross, GA 30093, USA
: >> >Pho: 770.564.5540, Ext. 2342
: >> >Fax: 770.564.5541
: >> >Cellular Phone: 678.429.2124
: >> >OEM E-mail: k4bet@digital-wireless.com
: >> >http://www.digital-wireless.com
: >> >SSuRFnet E-mail: k4bet@ssurfnet.com
: >> >http://www.ssurfnet.com
: >> >
: >> >Visit with us at ISA Expo 2000!
: >> >Booth 1843
: >> >21 - 24 August, 2000
: >> >New Orleans, LA USA
: >> >http://www.isa.org/events/
: >> >
: >> >----- Original Message -----
: >> >From: "William C. Hast" <wchast@utilpart.com>
: >> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >> >Sent: Thursday, July 13, 2000 2:46 PM
: >> >Subject: [ss] Right Direction
: >> >
: >> >
: >> >: Folks:
: >> >: These guys are going the right direction, the just
: >> >: need to put in a real SS RF deck.
: >> >:
: >> >: Go take a look at it and see what you think.
: >> >:
: >> >: http://www.cybiko.com/
: >> >:
: >> >: I think that they have the right concept. They
: >> >: just need to do a bit of work on it.
: >> >:
: >> >: ---
: >> >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: >> >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >> >:
: >> >:
: >> >
: >> >
: >> >
: >> >---
: >> >You are currently subscribed to ss as: venumadhavj@hotmail.com
: >> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >> >
: >>
: >>
_____
: >> Get Your Private, Free E-mail from MSN Hotmail at
http://www.hotmail.com
: >>
: >>

: >> --
: >>
: >> Subject: Re: Right Direction
: >> From: "Hast, Chuck" <wchast@utilpart.com>
: >> Date: Fri, 14 Jul 2000 07:32:35 -0400
: >> X-Message-Number: 4
: >>
: >> I called them and talked to them. They appear VERY open to
: >> ideas and recommendations. Indeed the RF deck is a deck
: >> out of a 900 MHz discrete channel phone (as told to me by
: >> them) there are 30 selectable channels and according to the
: >> propaganda each channel can support up to 100 interconnected
: >> users.
: >>
: >> For those who do not think much of it, I guess it ain't much but
: >> like my grandmomma said one day, "wish in one hand and spit
: >> in the other and see which fills the fastest", some times I think
: >> we do a lot of wishing and not enough spittin', so here we
: >> stand empty handed, and some company out there is bringing
: >> out the beginnings of the box we have been wishing for.
: >>
: >> In talking to them they sounded like the would like to develop
: >> a device and a network concept that would be like the ricochet
: >> system, or a cell like system, but they were VERY open to
: >> ideas and recommendations.
: >>
: >> They also want to do voice, but do not handle it yet. I believe
: >> the sound part is all there it is probably a software issue.
: >>
: >> I will repeat my self again, if we want to get some volume on
: >> these things we are going to have to get the volume radio users
: >> (voice users) involved, or I fear we will continue to spend a lot
: >> of time wishing. I totally favor a data world, but reality is that
: >> the world is a voice world, and the best way to get volume is
: >> to convert that voice into a data stream and then do neat magic
: >> with it that will make the voice users want to get on your system,
: >> pay the (insert monetary unit here) to do so and keep from draining
: >> YOUR pocket so much.
: >>
: >> Yes this box is crude and rude but, it is a start. I can probably do
: >> better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
: >> some software in there to handle the voice part and a access point
: >> well place on top of my building to use it a few hundred yards from
: >> the building, but the cost is now up there at over 1K USD.
: >>
: >> If they can keep the cost on this down near where it is now, and
: >> still field a SS device that can work through a hub or SS repeater,
: >> and carry a bit of power behind it (up to the 1 watt part 15 max)
: >> then they are really going the right direction for the volume user.
: >>
: >> Go out and look at the web site, give them a call, or a e-mail and
: >> see what you make of it.
: >>
: >>
: >>
: >>
: >> --
: >>
: >> Subject: Re: Right Direction
: >> From: "Paul McInnish" <pmcinnish@digiwrls.com>
: >> Date: Fri, 14 Jul 2000 11:21:49 -0400
: >> X-Message-Number: 5
: >>
: >> This is a multi-part message in MIME format.
: >>
: >> ------=_NextPart_000_04CC_01BFED85.B40939C0
: >> Content-Type: text/plain;
: >> charset="Windows-1252"
: >> Content-Transfer-Encoding: quoted-printable
: >>
: >> See response embedded below:
: >>
: >> Paul McInnish - K4BET
: >> Manager, Business Development
: >> Digital Wireless Corp.
: >> One Meca Way
: >> Norcross, GA 30093, USA
: >> Pho: 770.564.5540, Ext. 2342
: >> Fax: 770.564.5541

: >> Cellular Phone: 678.429.2124
: >> OEM E-mail: k4bet@digital-wireless.com
: >> http://www.digital-wireless.com
: >> SSuRFnet E-mail: k4bet@ssurfnet.com
: >> http://www.ssurfnet.com
: >>
: >> Visit with us at ISA Expo 2000!
: >> Booth 1843
: >> 21 - 24 August, 2000
: >> New Orleans, LA USA
: >> http://www.isa.org/events/
: >> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
: >> New address (bigger and much nicer);
: >> Effective 14 August 2000:
: >>
: >> Digital Wireless Corporation
: >> 5375 Oakbrook Parkway
: >> Norcross, GA 30093 USA
: >> Pho: 678.684.2000
: >> Fax: 678.684.2001
: >>
: >> ----- Original Message -----=20
: >> From: "venumadhav josyula" <venumadhavj@hotmail.com>
: >> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >> Sent: Friday, July 14, 2000 7:33 AM
: >> Subject: [ss] Re: Right Direction
: >>
: >>
: >> : hey paul,
: >> :=20
: >> : I am student doing my masters in ee, my area of specilization is ss =
: >> and=20
: >> : datacommunications.
: >> :=20
: >> : 1   you say all the intermod that is generated in this band is unreal
=
: >>   =20
: >> : why is this?
: >> It is 2nd., 3rd. and 4th. order harmonics from paging systems, two-way
=
: >> radio systems, TV stations, microwave ovens, etc. We have taken =
: >> (usually in larger metro areas, a spectrum analyzer and taken a look at
=
: >> 900 MHz ISM band... and the display looks like a "Prarie Grass field in
=
: >> a 50 mile per hour wind and majority of the 'jamming' signals are very
=
: >> high in amplitude. No way can critical data applications tolerate
this. =
: >> Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory =
: >> Automation control?
: >>
: >> : 2 secondly what is reason of using 2.4ghz.
: >> As I stated in my original message: "QRM, QRN, and all the intermod =
: >> generated that falls into this band is unreal! Main reason we =
: >> discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM =
: >> band... also allows us to ship world wide (very high acceptance of =
: >> product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold
=
: >> in USA, Canada and Mexico (legally)."
: >>
: >>
: >> : 3 Are you talking about wireless internet and data services ?
: >> Our core business is commercial and industrial and we took this proven
=
: >> and accepted OEM SS Transceiver Module and developed a line of ISP and
=
: >> Ethernet products.
: >>
: >> I am doing some neat things at home with some of our products... in the
=
: >> event my home ISP is monitoring this server. just expermenting when I =
: >> tell this... "I have ADSL @ home & sending a full connection to/from =
: >> daugher & son-in-law a mile away! By bridging my LAN at home with
their =
: >> LAN at their home!" Using a router so the ISP only sees one IP! (Also =
: >> provides the firewall I need for security.)
: >>
: >> I hope the group does not object to any response such as this because I

=
: >> do not want to convert a 'ham radio oriented' list server into a =
: >> commercial venture... however, I have a ball dealing in the SS world.
=
: >> Its fun!
: >>
: >> :=20
: >> : thanking you
: >> : yours sincerely
: >> :=20
: >> :=20
: >> :=20
: >> : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: >> : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
: >> <ss@lists.tapr.org>
: >> : >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: >> : >Subject: [ss] Re: Right Direction
: >> : >Date: Thu, 13 Jul 2000 16:22:39 -0400
: >> : >MIME-Version: 1.0
: >> : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id=20
: >> : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
: >> : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: >> : >Return-Path: <PMcinnish@digiwrls.com>
: >> : >Message-ID:=20
: >> : =
: >>
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
: >> org>
: >> : >References:=20
: >> : =
: >>
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
: >> pr.org>
: >> : >Organization: Digital Wireless Corporation
: >> : >X-Priority: 3
: >> : >X-MSMail-Priority: Normal
: >> : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: >> : >X-MDaemon-Deliver-To: ss@lists.tapr.org
: >> : >X-Return-Path: pmcinnish@digiwrls.com
: >> : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: >> : >List-Software: Lyris Server version 3.0
: >> : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: >> : >List-Owner: <mailto:owner-ss@lists.tapr.org>
: >> : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: >> : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >> : >Sender: bounce-ss-17222@lists.tapr.org
: >> : >Precedence: bulk
: >> : >
: >> : >Yep... NOT SS and range is limited to just a few feet!
: >> : >
: >> : >Also, their choice of the 900 MHz ISM band is a horrible mistake...
=
: >> QRM,
: >> : >QRN, and all the intermod generated that falls into this band is =
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: >> : >Main reason we discontinued all products in 900 MHz ISM band and
went =
: >> to=20
: >> : >2.4
: >> : >GHz ISM band... also allows us to ship world wide (very high =
: >> acceptance of
: >> : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be =
: >> sold in
: >> : >USA, Canada and Mexico (legally).
: >> : >
: >> : >73,
: >> : >
: >> : >Paul McInnish - K4BET
: >> : >Manager, Business Development
: >> : >Digital Wireless Corp.
: >> : >One Meca Way
: >> : >Norcross, GA 30093, USA
: >> : >Pho: 770.564.5540, Ext. 2342
: >> : >Fax: 770.564.5541
: >> : >Cellular Phone: 678.429.2124
: >> : >OEM E-mail: k4bet@digital-wireless.com
: >> : >http://www.digital-wireless.com
: >> : >SSuRFnet E-mail: k4bet@ssurfnet.com

: >> : >http://www.ssurfnet.com
: >> : >
: >> : >Visit with us at ISA Expo 2000!
: >> : >Booth 1843
: >> : >21 - 24 August, 2000
: >> : >New Orleans, LA USA
: >> : >http://www.isa.org/events/
: >> : >
: >> : >----- Original Message -----
: >> : >From: "William C. Hast" <wchast@utilpart.com>
: >> : >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: >> : >Sent: Thursday, July 13, 2000 2:46 PM
: >> : >Subject: [ss] Right Direction
: >> : >
: >> : >
: >> : >: Folks:
: >> : >: These guys are going the right direction, the just
: >> : >: need to put in a real SS RF deck.
: >> : >:
: >> : >: Go take a look at it and see what you think.
: >> : >:
: >> : >: http://www.cybiko.com/
: >> : >:
: >> : >: I think that they have the right concept. They
: >> : >: just need to do a bit of work on it.
: >> : >:
: >> : >: ---
: >> : >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: >> : >: To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: >> : >:
: >> : >:
: >> : >
: >> : >
: >> : >
: >> : >---
: >> : >You are currently subscribed to ss as: venumadhavj@hotmail.com
: >> : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >> : >
: >> :=20
: >> : =
: >>
_____
: >> : Get Your Private, Free E-mail from MSN Hotmail at =
: >> http://www.hotmail.com
: >> :=20
: >> :=20
: >> : ---
: >> : You are currently subscribed to ss as: k4bet@digital-wireless.com
: >> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >> :=20
: >> :=20
: >>
: >> ------=_NextPart_000_04CC_01BFED85.B40939C0
: >> Content-Type: text/html;
: >> charset="Windows-1252"
: >> Content-Transfer-Encoding: quoted-printable
: >>
: >> <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
: >> <HTML><HEAD>
: >> <META content=3D"text/html; charset=3Dwindows-1252" =
: >> http-equiv=3DContent-Type>
: >> <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
: >> <STYLE></STYLE>
: >> </HEAD>
: >> <BODY>
: >> <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
: >> <DIV> </DIV>
: >> <DIV><FONT size=3D2>Paul McInnish - K4BET
Manager, Business=20
: >> Development
Digital Wireless Corp.
One Meca Way
Norcross, GA =
: >> 30093,=20
: >> USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular =
: >> Phone:=20
: >> 678.429.2124
OEM E-mail: </FONT><A=20
: >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<A=20
: >> href=3D"http://www.digital-wireless.com"><FONT=20
: >> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT =

: >> size=3D2>SSuRFnet=20
: >> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arch
ive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
: >> size=3D2>k4bet@ssurfnet.com</FONT></A>
<A =
: >> href=3D"http://www.ssurfnet.com"><FONT=20
: >> size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
: >> <DIV> </DIV>
: >> <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!
Booth 1843
21
=
: >> - 24=20
: >> August, 2000
New Orleans, LA USA
</FONT><A=20
: >> href=3D"http://www.isa.org/events/"><FONT=20
: >> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT=20
: >> size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and
much=20
: >> nicer);
Effective 14 August 2000:</FONT></DIV>
: >> <DIV> </DIV>
: >> <DIV><FONT size=3D2>Digital Wireless Corporation
5375 Oakbrook=20
: >> Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax:=20
: >> 678.684.2001
</FONT></DIV>
: >> <DIV><FONT size=3D2>----- Original Message ----- </FONT>
: >> <DIV><FONT size=3D2>From: "venumadhav josyula" <</FONT><A=20
: >> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: >> size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
: >> size=3D2>></FONT></DIV>
: >> <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest
Group"=20
: >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:ss@lists.tapr.org""><FONT=20
: >> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>></FONT></DIV>
: >> <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
: >> <DIV><FONT size=3D2>Subject: [ss] Re: Right
Direction</FONT></DIV></DIV>
: >> <DIV>
</DIV>
: >> <DIV><FONT size=3D2>: hey paul,
: <BR>: I am student doing my
masters =
: >> in ee, my=20
: >> area of specilization is ss and <BR>: datacommunications.
: <BR>:=20
: >> 1   you say all the intermod that is generated in this band
is =
: >>
: >> unreal
: why is this?</FONT></DIV>
: >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd. and =
: >> 4th. order=20
: >> harmonics from paging systems, two-way radio systems, TV stations, =
: >> microwave=20
: >> ovens, etc. We have taken (usually in larger metro areas, a =
: >> spectrum=20
: >> analyzer and taken a look at 900 MHz ISM band... and the display =
: >> looks like=20
: >> a "Prarie Grass field in a 50 mile per hour wind and majority of the =
: >> 'jamming'=20
: >> signals are very high in amplitude. No way can critical data =
: >> applications=20
: >> tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
: >> monitoring?=20
: >> Factory Automation control?</EM></STRONG></FONT></DIV>
: >> <DIV><FONT size=3D2>
: 2 secondly what is reason of using=20
: >> 2.4ghz.</FONT></DIV>
: >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
: >> original message:=20
: >> "QRM, QRN, and all the intermod generated that falls into this
band =
: >> is=20
: >> unreal! Main reason we discontinued all products in 900 MHz ISM band
and =
: >> went=20
: >> to 2.4GHz ISM band... also allows us to ship world wide (very
high=20
: >> acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can
=
: >> ONLY be=20
: >> sold in USA, Canada and Mexico =
: >> (legally)."
</EM></STRONG></FONT></DIV>
: >> <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
: >> internet and data=20
: >> services ?</FONT></DIV>
: >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is =
: >> commercial and=20

: >> industrial and we took this proven and accepted OEM SS Transceiver
=
: >> Module=20
: >> and developed a line of ISP and Ethernet =
: >> products.</EM></STRONG></FONT></DIV>
: >> <DIV> </DIV>
: >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some neat =
: >> things at home=20
: >> with some of our products... in the event my home ISP is monitoring
this =
: >> server.=20
: >> just expermenting when I tell this... "I have ADSL @ home & sending
=
: >> a full=20
: >> connection to/from daugher & son-in-law a mile away! By
=
: >> bridging=20
: >> my LAN at home with their LAN at their home!" Using a router so the ISP
=
: >> only=20
: >> sees one IP! (Also provides the firewall I need for=20
: >> security.)</EM></STRONG></FONT></DIV>
: >> <DIV> </DIV>
: >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group does =
: >> not object=20
: >> to any response such as this because I do not want to convert a =
: >> 'ham radio=20
: >> oriented' list server into a commercial venture... however, I have a =
: >> ball=20
: >> dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
: >> <DIV><FONT size=3D2>
: <BR>: thanking you
: yours sincerely
:
=
: >>
: <BR>:=20
: >>
: >From: "Paul McInnish" <</FONT><A=20
: >> href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
: >> size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
: >> >Reply-To:=20
: >> "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
: >> href=3D"mailto:ss@lists.tapr.org"><FONT =
: >> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: >> size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest
Group" =
: >>
: >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:ss@lists.tapr.org""><FONT=20
: >> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
: >> >Subject: [ss] Re:=20
: >> Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
:=20
: >> >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
: >> hotmail.com=20
: >> (3.2) with ESMTP id <BR>:
>MHotMailBB3770DC00C3D820F3B6CC11D91808F50; =
: >> Thu Jul=20
: >> 13 13:26:12 2000
: >From </FONT><A=20
: >> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: >> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2> Thu =
: >> Jul 13=20
: >> 13:28:28 2000
: >Return-Path: <</FONT><A=20
: >> href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
: >> size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
: >> >Message-ID:=20
: >>
: ><</FONT><A=20
: >>
href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
: >> m@lists.tapr.org"><FONT=20
: >>
size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
: >> s.tapr.org</FONT></A><FONT=20
: >> size=3D2>>
: >References: <BR>: ><</FONT><A=20
: >>
href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
: >> .com@lists.tapr.org"><FONT=20
: >>
size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
: >> ists.tapr.org</FONT></A><FONT=20
: >> size=3D2>>
: >Organization: Digital Wireless
Corporation
:=20
: >> >X-Priority: 3
: >X-MSMail-Priority: Normal
:
>X-MimeOLE: =

: >>
: >> Produced By Microsoft MimeOLE V5.50.4133.2400
: =
: >> >X-MDaemon-Deliver-To:=20
: >> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&q
uot;mailto:ss@lists.tapr.org""><FONT=20
: >> size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
: >> >X-Return-Path:=20
: >> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&q
uot;mailto:pmcinnish@digiwrls.com""><FONT=20
: >> size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
: >> >List-Unsubscribe:=20
: >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:leave-ss-6751T@lists.tapr.org""><FONT=20
: >> size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
: >> size=3D2>>
:=20
: >> >List-Software: Lyris Server version 3.0
: >List-Subscribe:=20
: >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:subscribe-ss@lists.tapr.org""><FONT=20
: >> size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
: >> size=3D2>>
:=20
: >> >List-Owner: <</FONT><A =
: >> href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
: >> size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
: >> size=3D2>>
:=20
: >> >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20
: >> href=3D"http://www.tapr.org"><FONT =
: >> size=3D2>http://www.tapr.org</FONT></A><FONT=20
: >> size=3D2>>
: >X-Message-Id:=20
: >> <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: =
: >> </FONT><A=20
: >> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: >> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT
size=3D2>:=20
: >> >Precedence: bulk
: >
: >Yep... NOT SS and range is =
: >> limited to=20
: >> just a few feet!
: >
: >Also, their choice of the 900 MHz =
: >> ISM band=20
: >> is a horrible mistake... QRM,
: >QRN, and all the intermod =
: >> generated that=20
: >> falls into this band is unreal!
: >Main reason we discontinued
all =
: >>
: >> products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz ISM
=
: >> band...=20
: >> also allows us to ship world wide (very high acceptance of
: =
: >> >product line=20
: >> now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
: >> >USA,=20
: >> Canada and Mexico (legally).
: >
: >73,
: >
: =
: >> >Paul=20
: >> McInnish - K4BET
: >Manager, Business Development
:
>Digital =
: >>
: >> Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
: >> USA
:=20
: >> >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
: >> >Cellular=20
: >> Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
: >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
: >> ></FONT><A=20
: >> href=3D"http://www.digital-wireless.com"><FONT=20
: >> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT size=3D2>:
=
: >> >SSuRFnet=20
: >> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arch
ive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
: >> size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>:
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: >>
: >> href=3D"http://www.ssurfnet.com"><FONT=20
: >> size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
: >> >
: >Visit=20
: >> with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August,
=
: >> 2000
:=20
: >> >New Orleans, LA USA
: ></FONT><A=20
: >> href=3D"http://www.isa.org/events/"><FONT=20

: >> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
: >> >
:=20
: >> >----- Original Message -----
: >From: "William C. Hast" =
: >> <</FONT><A=20
: >> href=3D"mailto:wchast@utilpart.com"><FONT=20
: >> size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
: >To:
=
: >> "TAPR Spread=20
: >> Spectrum Special Interest Group" <</FONT><A=20
: >> href=3D"mailto:ss@lists.tapr.org"><FONT =
: >> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: >> size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
: >> >Subject:=20
: >> [ss] Right Direction
: >
: >
: >: Folks:
: >: =
: >> These guys=20
: >> are going the right direction, the just
: >: need to put in a
real =
: >> SS RF=20
: >> deck.
: >:
: >: Go take a look at it and see what you =
: >> think.
:=20
: >> >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/
mail_archive/3D"http://www.cybiko.com/""><FONT=20
: >> size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
: >> >:
: >: I=20
: >> think that they have the right concept. They
: >: just need to do
=
: >> a bit of=20
: >> work on it.
: >:
: >: ---
: >: You are currently =
: >> subscribed to=20
: >> ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archi
ve/3D"mailto:k4bet@digital-wireless.com""><FONT=20
: >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>:
>: =
: >> To=20
: >> unsubscribe send a blank email to </FONT><A=20
: >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>:
=
: >> >:
:=20
: >> >:
: >
: >
: >
: >---
: >You are =
: >> currently=20
: >> subscribed to ss as: </FONT><A =
: >> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: >> size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>: >To
=
: >> unsubscribe=20
: >> send a blank email to </FONT><A=20
: >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>:
=
: >> >
:=20
: >>
:=20
: >>
_____<=
: >> BR>:=20
: >> Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
: >> href=3D"http://www.hotmail.com"><FONT=20
: >> size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>: =
: >>
: ---
:=20
: >> You are currently subscribed to ss as: </FONT><A=20
: >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: To =
: >> unsubscribe=20
: >> send a blank email to </FONT><A=20
: >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>:
=
: >>
:=20
: >> </FONT></DIV></BODY></HTML>
: >>
: >> ------=_NextPart_000_04CC_01BFED85.B40939C0--
: >>
: >>
: >>
: >>
: >>
: >> ---
: >>
: >> END OF DIGEST

: >>
: >> ---
: >> You are currently subscribed to ss as: ussailis@shaysnet.com
: >> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >>
: >>
: >
: >---
: >You are currently subscribed to ss as: kp4djt@tampabay.rr.com
: >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
:
: Chuck Hast   e-mail   kp4djt@tampabay.rr.com
:
:   ---- FPAC ----
: www.qsl.net/fpac/
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] Re: ss digest: July 14, 2000

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 17 Jul 2000 09:27:11 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-97048-2000.07.17-08.34.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jim... you probably are not listening to the various microwave ovens that we have gone out & purchased, off the shelf @ local consumer outlets, put them on the bench & plug them in! Man... their local oscillators (WHICH DO NOT OPERATE @ THE OUTPUT FREQUENCIES) are radiating birdies all over the place... some at very high levels and exceeding FCC allowable limits!

The whole world has paging systems operating in the 400 MHz band... the keyless entry, MTS paging, (some of these systems run 300 watts ERP) etc., etc. are in the high end of 450 - 500 MHz.... simple math times two puts the first harmonic in the 900 ISM band... other frequencies falling right out side (above - below the 900 MHz band) beating with other services also creates a ton of crud!

The uses for the digital SS technology in a rural area is very remote...

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
One Meca Way
Norcross, GA 30093, USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular Phone: 678.429.2124
OEM E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com
SSuRFnet E-mail: k4bet@ssurfnet.com
http://www.ssurfnet.com

Visit with us at ISA Expo 2000!
Booth 1843
21 - 24 August, 2000
New Orleans, LA USA
http://www.isa.org/events/
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and much nicer);
Effective 14 August 2000:

Digital Wireless Corporation
5375 Oakbrook Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax: 678.684.2001
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

----- Original Message -----
From: "Jim Ussailis" <ussailis@equinox.shaysnet.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "ss digest recipients" <ss@lists.tapr.org>
Sent: Saturday, July 15, 2000 8:43 PM
Subject: [ss] Re: ss digest: July 14, 2000

: Something I don't understand regarding intermod in the 900 MHz ISM band...
:
: Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and up.
: I don't doubt about the harmonics from TV stations in metro areas, but...
:
: I listed to the 900 MHz band almost daily, and hear nothing, or see
: nothing on the analyser. Of course I am in a rural area.
:
: We do have several pagers around 931. The rest of it is very quiet.
:
:
: Jim Ussailis, W1EQO
:
: National Wireless, Inc
:
:
: On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group digest
wrote:
:
: > TAPR Spread Spectrum Special Interest Group Digest for Friday, July 14,
2000.
: >
: > 1. Re: Right Direction
: > 2. Re: Right Direction
: > 3. Re: Right Direction
: > 4. Re: Right Direction
: > 5. Re: Right Direction
: >
: > --
: >
: > Subject: Re: Right Direction
: > From: Derek Lassen <kn6td@clubnet.net>
: > Date: Fri, 14 Jul 2000 01:51:40 -0700
: > X-Message-Number: 1
: >
: > Anybody get one yet?
: > What's the processor?
: >
: > I wonder if there is a market for a game server / range extender (small
: > enough to stay in the backpack).
: >
: > :>
: >
: > (s) Derek
: >
: > At 10:03 PM 7/13/00 -0600, you wrote:
: > >I hate to rain on your parade, but going in the right direction for
: > >what? Wireless chat at 150'? If the person's that close I'll get up and
: > >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
: > >Palm. Internet? screen's kind of small ain't it? Games? I wish I had
the
: > >time. Friend finder? Maybe it'll come in handy at the next Rolling
: > >Stones Concert. This is a toy if I've ever seen one. Maybe something
fun
: > >for the kids. I can't imagine what I'd use it for. Someone obviously
: > >disagrees with me and has put beaucoup bucks into it to be able to sell
: > >the thing for $129. Maybe I'll get one for my kid for xmas.
: > >
: > >bah humbug
: > >
: > >--Dave
: > >
: > >"William C. Hast" wrote:
: > >
: > > > Folks:
: > > > These guys are going the right direction, the just
: > > > need to put in a real SS RF deck.
: > > >
: > > > Go take a look at it and see what you think.
: > > >

: > > > http://www.cybiko.com/
: > > >
: > > > I think that they have the right concept. They
: > > > just need to do a bit of work on it.
: > > >
: > > > ---
: > > > You are currently subscribed to ss as: depagnier@uswest.net
: > > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > >
: > >
: > >---
: > >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
: > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >
: >
: > --
: >
: > Subject: Re: Right Direction
: > From: Derek Lassen <kn6td@clubnet.net>
: > Date: Fri, 14 Jul 2000 01:59:33 -0700
: > X-Message-Number: 2
: >
: > I just looked at the web site - I shoulda RTFM. Sorry.
: >
: > Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
: > seems to have a compact flash.
: >
: > RF communications is via 19k on 915 MHz GMSK.
: >
: > 73 de KN6TD
: >
: > (s) Derek
: >
: > At 01:51 AM 7/14/00 -0700, you wrote:
: > >Anybody get one yet?
: > >What's the processor?
: > >
: > >I wonder if there is a market for a game server / range extender (small
: > >enough to stay in the backpack).
: > >
: > >:>
: > >
: > >(s) Derek
: > >
: > >At 10:03 PM 7/13/00 -0600, you wrote:
: > >>I hate to rain on your parade, but going in the right direction for
: > >>what? Wireless chat at 150'? If the person's that close I'll get up
and
: > >>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
: > >>Palm. Internet? screen's kind of small ain't it? Games? I wish I had
the
: > >>time. Friend finder? Maybe it'll come in handy at the next Rolling
: > >>Stones Concert. This is a toy if I've ever seen one. Maybe something
fun
: > >>for the kids. I can't imagine what I'd use it for. Someone obviously
: > >>disagrees with me and has put beaucoup bucks into it to be able to
sell
: > >>the thing for $129. Maybe I'll get one for my kid for xmas.
: > >>
: > >>bah humbug
: > >>
: > >>--Dave
: > >>
: > >>"William C. Hast" wrote:
: > >>
: > >> > Folks:
: > >> > These guys are going the right direction, the just
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: > >> >
: > >> > Go take a look at it and see what you think.
: > >> >
: > >> > http://www.cybiko.com/
: > >> >
: > >> > I think that they have the right concept. They
: > >> > just need to do a bit of work on it.
: > >> >
: > >> > ---
: > >> > You are currently subscribed to ss as: depagnier@uswest.net

: > >> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >
: >
: > --
: >
: > Subject: Re: Right Direction
: > From: "venumadhav josyula" <venumadhavj@hotmail.com>
: > Date: Fri, 14 Jul 2000 04:33:31 PDT
: > X-Message-Number: 3
: >
: > hey paul,
: >
: > I am student doing my masters in ee, my area of specilization is ss and
: > datacommunications.
: >
: > 1   you say all the intermod that is generated in this band is unreal
: > why is this?
: > 2 secondly what is reason of using 2.4ghz.
: > 3 Are you talking about wireless internet and data services ?
: >
: > thanking you
: > yours sincerely
: >
: >
: >
: > >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > >Subject: [ss] Re: Right Direction
: > >Date: Thu, 13 Jul 2000 16:22:39 -0400
: > >MIME-Version: 1.0
: > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
: > >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
: > >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: > >Return-Path: <PMcinnish@digiwrls.com>
: > >Message-ID:
: >
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org
>
: > >References:
: >
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.
org>
: > >Organization: Digital Wireless Corporation
: > >X-Priority: 3
: > >X-MSMail-Priority: Normal
: > >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: > >X-MDaemon-Deliver-To: ss@lists.tapr.org
: > >X-Return-Path: pmcinnish@digiwrls.com
: > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: > >List-Software: Lyris Server version 3.0
: > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: > >List-Owner: <mailto:owner-ss@lists.tapr.org>
: > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: > >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: > >Sender: bounce-ss-17222@lists.tapr.org
: > >Precedence: bulk
: > >
: > >Yep... NOT SS and range is limited to just a few feet!
: > >
: > >Also, their choice of the 900 MHz ISM band is a horrible mistake...
QRM,
: > >QRN, and all the intermod generated that falls into this band is
unreal!
: > >Main reason we discontinued all products in 900 MHz ISM band and went
to
: > >2.4
: > >GHz ISM band... also allows us to ship world wide (very high acceptance
of
: > >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold
in
: > >USA, Canada and Mexico (legally).
: > >
: > >73,
: > >
: > >Paul McInnish - K4BET
: > >Manager, Business Development

: > >Digital Wireless Corp.
: > >One Meca Way
: > >Norcross, GA 30093, USA
: > >Pho: 770.564.5540, Ext. 2342
: > >Fax: 770.564.5541
: > >Cellular Phone: 678.429.2124
: > >OEM E-mail: k4bet@digital-wireless.com
: > >http://www.digital-wireless.com
: > >SSuRFnet E-mail: k4bet@ssurfnet.com
: > >http://www.ssurfnet.com
: > >
: > >Visit with us at ISA Expo 2000!
: > >Booth 1843
: > >21 - 24 August, 2000
: > >New Orleans, LA USA
: > >http://www.isa.org/events/
: > >
: > >----- Original Message -----
: > >From: "William C. Hast" <wchast@utilpart.com>
: > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > >Sent: Thursday, July 13, 2000 2:46 PM
: > >Subject: [ss] Right Direction
: > >
: > >
: > >: Folks:
: > >: These guys are going the right direction, the just
: > >: need to put in a real SS RF deck.
: > >:
: > >: Go take a look at it and see what you think.
: > >:
: > >: http://www.cybiko.com/
: > >:
: > >: I think that they have the right concept. They
: > >: just need to do a bit of work on it.
: > >:
: > >: ---
: > >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: > >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > >:
: > >:
: > >
: > >
: > >
: > >---
: > >You are currently subscribed to ss as: venumadhavj@hotmail.com
: > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > >
: >
: > _____
: > Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
: >
: >
: > ---
: >
: > Subject: Re: Right Direction
: > From: "Hast, Chuck" <wchast@utilpart.com>
: > Date: Fri, 14 Jul 2000 07:32:35 -0400
: > X-Message-Number: 4
: >
: > I called them and talked to them. They appear VERY open to
: > ideas and recommendations. Indeed the RF deck is a deck
: > out of a 900 MHz discrete channel phone (as told to me by
: > them) there are 30 selectable channels and according to the
: > propaganda each channel can support up to 100 interconnected
: > users.
: >
: > For those who do not think much of it, I guess it ain't much but
: > like my grandmomma said one day, "wish in one hand and spit
: > in the other and see which fills the fastest", some times I think
: > we do a lot of wishing and not enough spittin', so here we
: > stand empty handed, and some company out there is bringing
: > out the beginnings of the box we have been wishing for.
: >
: > In talking to them they sounded like the would like to develop
: > a device and a network concept that would be like the ricochet
: > system, or a cell like system, but they were VERY open to
: > ideas and recommendations.
: >
: > They also want to do voice, but do not handle it yet. I believe

: > the sound part is all there it is probably a software issue.
: >
: > I will repeat my self again, if we want to get some volume on
: > these things we are going to have to get the volume radio users
: > (voice users) involved, or I fear we will continue to spend a lot
: > of time wishing. I totally favor a data world, but reality is that
: > the world is a voice world, and the best way to get volume is
: > to convert that voice into a data stream and then do neat magic
: > with it that will make the voice users want to get on your system,
: > pay the (insert monetary unit here) to do so and keep from draining
: > YOUR pocket so much.
: >
: > Yes this box is crude and rude but, it is a start. I can probably do
: > better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
: > some software in there to handle the voice part and a access point
: > well place on top of my building to use it a few hundred yards from
: > the building, but the cost is now up there at over 1K USD.
: >
: > If they can keep the cost on this down near where it is now, and
: > still field a SS device that can work through a hub or SS repeater,
: > and carry a bit of power behind it (up to the 1 watt part 15 max)
: > then they are really going the right direction for the volume user.
: >
: > Go out and look at the web site, give them a call, or a e-mail and
: > see what you make of it.
: >
: >
: >
: >
: > --
: >
: > Subject: Re: Right Direction
: > From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > Date: Fri, 14 Jul 2000 11:21:49 -0400
: > X-Message-Number: 5
: >
: > This is a multi-part message in MIME format.
: >
: > ------=_NextPart_000_04CC_01BFED85.B40939C0
: > Content-Type: text/plain;
: > charset="Windows-1252"
: > Content-Transfer-Encoding: quoted-printable
: >
: > See response embedded below:
: >
: > Paul McInnish - K4BET
: > Manager, Business Development
: > Digital Wireless Corp.
: > One Meca Way
: > Norcross, GA 30093, USA
: > Pho: 770.564.5540, Ext. 2342
: > Fax: 770.564.5541
: > Cellular Phone: 678.429.2124
: > OEM E-mail: k4bet@digital-wireless.com
: > http://www.digital-wireless.com
: > SSuRFnet E-mail: k4bet@ssurfnet.com
: > http://www.ssurfnet.com
: >
: > Visit with us at ISA Expo 2000!
: > Booth 1843
: > 21 - 24 August, 2000
: > New Orleans, LA USA
: > http://www.isa.org/events/
: > ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
: > New address (bigger and much nicer);
: > Effective 14 August 2000:
: >
: > Digital Wireless Corporation
: > 5375 Oakbrook Parkway
: > Norcross, GA 30093 USA
: > Pho: 678.684.2000
: > Fax: 678.684.2001
: >
: > ----- Original Message -----=20
: > From: "venumadhav josyula" <venumadhavj@hotmail.com>
: > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > Sent: Friday, July 14, 2000 7:33 AM
: > Subject: [ss] Re: Right Direction
: >

: >
: > : hey paul,
: > :=20
: > : I am student doing my masters in ee, my area of specilization is ss =
: > and=20
: > : datacommunications.
: > :=20
: > : 1   you say all the intermod that is generated in this band is unreal
=
: >   =20
: > : why is this?
: > It is 2nd., 3rd. and 4th. order harmonics from paging systems, two-way =
: > radio systems, TV stations, microwave ovens, etc. We have taken =
: > (usually in larger metro areas, a spectrum analyzer and taken a look at
=
: > 900 MHz ISM band... and the display looks like a "Prarie Grass field in
=
: > a 50 mile per hour wind and majority of the 'jamming' signals are very =
: > high in amplitude. No way can critical data applications tolerate this.
=
: > Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory =
: > Automation control?
: >
: > : 2 secondly what is reason of using 2.4ghz.
: > As I stated in my original message: "QRM, QRN, and all the intermod =
: > generated that falls into this band is unreal! Main reason we =
: > discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM =
: > band... also allows us to ship world wide (very high acceptance of =
: > product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold =
: > in USA, Canada and Mexico (legally)."
: >
: >
: > : 3 Are you talking about wireless internet and data services ?
: > Our core business is commercial and industrial and we took this proven =
: > and accepted OEM SS Transceiver Module and developed a line of ISP and =
: > Ethernet products.
: >
: > I am doing some neat things at home with some of our products... in the
=
: > event my home ISP is monitoring this server. just expermenting when I =
: > tell this... "I have ADSL @ home & sending a full connection to/from =
: > daugher & son-in-law a mile away! By bridging my LAN at home with their
=
: > LAN at their home!" Using a router so the ISP only sees one IP! (Also =
: > provides the firewall I need for security.)
: >
: > I hope the group does not object to any response such as this because I
=
: > do not want to convert a 'ham radio oriented' list server into a =
: > commercial venture... however, I have a ball dealing in the SS world. =
: > Its fun!
: >
: > :=20
: > : thanking you
: > : yours sincerely
: > :=20
: > :=20
: > :=20
: > : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
: > <ss@lists.tapr.org>
: > : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > : >Subject: [ss] Re: Right Direction
: > : >Date: Thu, 13 Jul 2000 16:22:39 -0400
: > : >MIME-Version: 1.0
: > : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id=20
: > : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
: > : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: > : >Return-Path: <PMcinnish@digiwrls.com>
: > : >Message-ID:=20
: > : =
: >
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
: > org>
: > : >References:=20
: > : =
: >
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
: > pr.org>

: > : >Organization: Digital Wireless Corporation
: > : >X-Priority: 3
: > : >X-MSMail-Priority: Normal
: > : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: > : >X-MDaemon-Deliver-To: ss@lists.tapr.org
: > : >X-Return-Path: pmcinnish@digiwrls.com
: > : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: > : >List-Software: Lyris Server version 3.0
: > : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: > : >List-Owner: <mailto:owner-ss@lists.tapr.org>
: > : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: > : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: > : >Sender: bounce-ss-17222@lists.tapr.org
: > : >Precedence: bulk
: > : >
: > : >Yep... NOT SS and range is limited to just a few feet!
: > : >
: > : >Also, their choice of the 900 MHz ISM band is a horrible mistake... =
: > QRM,
: > : >QRN, and all the intermod generated that falls into this band is =
: > unreal!
: > : >Main reason we discontinued all products in 900 MHz ISM band and went
=
: > to=20
: > : >2.4
: > : >GHz ISM band... also allows us to ship world wide (very high =
: > acceptance of
: > : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be =
: > sold in
: > : >USA, Canada and Mexico (legally).
: > : >
: > : >73,
: > : >
: > : >Paul McInnish - K4BET
: > : >Manager, Business Development
: > : >Digital Wireless Corp.
: > : >One Meca Way
: > : >Norcross, GA 30093, USA
: > : >Pho: 770.564.5540, Ext. 2342
: > : >Fax: 770.564.5541
: > : >Cellular Phone: 678.429.2124
: > : >OEM E-mail: k4bet@digital-wireless.com
: > : >http://www.digital-wireless.com
: > : >SSuRFnet E-mail: k4bet@ssurfnet.com
: > : >http://www.ssurfnet.com
: > : >
: > : >Visit with us at ISA Expo 2000!
: > : >Booth 1843
: > : >21 - 24 August, 2000
: > : >New Orleans, LA USA
: > : >http://www.isa.org/events/
: > : >
: > : >----- Original Message -----
: > : >From: "William C. Hast" <wchast@utilpart.com>
: > : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > : >Sent: Thursday, July 13, 2000 2:46 PM
: > : >Subject: [ss] Right Direction
: > : >
: > : >
: > : >: Folks:
: > : >: These guys are going the right direction, the just
: > : >: need to put in a real SS RF deck.
: > : >:
: > : >: Go take a look at it and see what you think.
: > : >:
: > : >: http://www.cybiko.com/
: > : >:
: > : >: I think that they have the right concept. They
: > : >: just need to do a bit of work on it.
: > : >:
: > : >: ---
: > : >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : >:
: > : >:
: > : >
: > : >
: > : >
: > : >---

```
: > : >You are currently subscribed to ss as: venumadhavj@hotmail.com
: > : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : >
: > :=20
: > : =
: > _________________________________________________________________
: > : Get Your Private, Free E-mail from MSN Hotmail at =
: > http://www.hotmail.com
: > :=20
: > :=20
: > : ---
: > : You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > :=20
: > :=20
: >
: > ------=_NextPart_000_04CC_01BFED85.B40939C0
: > Content-Type: text/html;
: > charset="Windows-1252"
: > Content-Transfer-Encoding: quoted-printable
: >
: > <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
: > <HTML><HEAD>
: > <META content=3D"text/html; charset=3Dwindows-1252" =
: > http-equiv=3DContent-Type>
: > <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
: > <STYLE></STYLE>
: > </HEAD>
: > <BODY>
: > <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
: > <DIV> </DIV>
: > <DIV><FONT size=3D2>Paul McInnish - K4BET<BR>Manager, Business=20
: > Development<BR>Digital Wireless Corp.<BR>One Meca Way<BR>Norcross, GA =
: > 30093,=20
: > USA<BR>Pho: 770.564.5540, Ext. 2342<BR>Fax: 770.564.5541<BR>Cellular =
: > Phone:=20
: > 678.429.2124<BR>OEM E-mail: </FONT><A=20
: > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > size=3D2>k4bet@digital-wireless.com</FONT></A><BR><A=20
: > href=3D"http://www.digital-wireless.com"><FONT=20
: > size=3D2>http://www.digital-wireless.com</FONT></A><BR><FONT =
: > size=3D2>SSuRFnet=20
: > E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archi
ve/3D&quot;mailto:k4bet@ssurfnet.com&quot;"><FONT=20
: > size=3D2>k4bet@ssurfnet.com</FONT></A><BR><A =
: > href=3D"http://www.ssurfnet.com"><FONT=20
: > size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
: > <DIV> </DIV>
: > <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!<BR>Booth 1843<BR>21
=
: > - 24=20
: > August, 2000<BR>New Orleans, LA USA<BR></FONT><A=20
: > href=3D"http://www.isa.org/events/"><FONT=20
: > size=3D2>http://www.isa.org/events/</FONT></A><BR><FONT=20
: > size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~<BR>New address (bigger and
much=20
: > nicer);<BR>Effective 14 August 2000:</FONT></DIV>
: > <DIV> </DIV>
: > <DIV><FONT size=3D2>Digital Wireless Corporation<BR>5375 Oakbrook=20
: > Parkway<BR>Norcross, GA 30093 USA<BR>Pho: 678.684.2000<BR>Fax:=20
: > 678.684.2001<BR></FONT></DIV>
: > <DIV><FONT size=3D2>----- Original Message ----- </FONT>
: > <DIV><FONT size=3D2>From: "venumadhav josyula" &lt;</FONT><A=20
: > href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: > size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
: > size=3D2>&gt;</FONT></DIV>
: > <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest Group"=20
: > &lt;</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3
D&quot;mailto:ss@lists.tapr.org&quot;"><FONT=20
: > size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>&gt;</FONT></DIV>
: > <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
: > <DIV><FONT size=3D2>Subject: [ss] Re: Right Direction</FONT></DIV></DIV>
: > <DIV><BR></DIV>
: > <DIV><FONT size=3D2>: hey paul,<BR>: <BR>: I am student doing my masters
=
: > in ee, my=20
: > area of specilization is ss and <BR>: datacommunications.<BR>: <BR>:=20
: > 1   you say all the intermod that is generated in this band is
=
```

: >
: > unreal
: why is this?</FONT></DIV>
: > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd. and =
: > 4th. order=20
: > harmonics from paging systems, two-way radio systems, TV stations, =
: > microwave=20
: > ovens, etc. We have taken (usually in larger metro areas, a =
: > spectrum=20
: > analyzer and taken a look at 900 MHz ISM band... and the display =
: > looks like=20
: > a "Prarie Grass field in a 50 mile per hour wind and majority of the =
: > 'jamming'=20
: > signals are very high in amplitude. No way can critical data =
: > applications=20
: > tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
: > monitoring?=20
: > Factory Automation control?</EM></STRONG></FONT></DIV>
: > <DIV><FONT size=3D2>
: 2 secondly what is reason of using=20
: > 2.4ghz.</FONT></DIV>
: > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
: > original message:=20
: > "QRM, QRN, and all the intermod generated that falls into this band
=
: > is=20
: > unreal! Main reason we discontinued all products in 900 MHz ISM band and
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: > went=20
: > to 2.4GHz ISM band... also allows us to ship world wide (very
high=20
: > acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can
=
: > ONLY be=20
: > sold in USA, Canada and Mexico =
: > (legally)."
</EM></STRONG></FONT></DIV>
: > <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
: > internet and data=20
: > services ?</FONT></DIV>
: > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is =
: > commercial and=20
: > industrial and we took this proven and accepted OEM SS Transceiver
=
: > Module=20
: > and developed a line of ISP and Ethernet =
: > products.</EM></STRONG></FONT></DIV>
: > <DIV> </DIV>
: > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some neat =
: > things at home=20
: > with some of our products... in the event my home ISP is monitoring this
=
: > server.=20
: > just expermenting when I tell this... "I have ADSL @ home & sending
=
: > a full=20
: > connection to/from daugher & son-in-law a mile away! By =
: > bridging=20
: > my LAN at home with their LAN at their home!" Using a router so the ISP
=
: > only=20
: > sees one IP! (Also provides the firewall I need for=20
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: > <DIV> </DIV>
: > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group does =
: > not object=20
: > to any response such as this because I do not want to convert a =
: > 'ham radio=20
: > oriented' list server into a commercial venture... however, I have a =
: > ball=20
: > dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
: > <DIV><FONT size=3D2>
: <BR>: thanking you
: yours sincerely
: =
: >
: <BR>:=20
: >
: >From: "Paul McInnish" <</FONT><A=20
: > href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
: > size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
: > >Reply-To:=20
: > "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
: > href=3D"mailto:ss@lists.tapr.org"><FONT =
: > size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: > size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest Group"
=

: >
: > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3
D"mailto:ss@lists.tapr.org""><FONT=20
: > size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
: > >Subject: [ss] Re:=20
: > Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
:=20
: > >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
: > hotmail.com=20
: > (3.2) with ESMTP id <BR>: >MHotMailBB3770DC00C3D820F3B6CC11D91808F50;
=
: > Thu Jul=20
: > 13 13:26:12 2000
: >From </FONT><A=20
: > href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: > size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2> Thu =
: > Jul 13=20
: > 13:28:28 2000
: >Return-Path: <</FONT><A=20
: > href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
: > size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
: > >Message-ID:=20
: >
: ><</FONT><A=20
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: > m@lists.tapr.org"><FONT=20
: >
size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
: > s.tapr.org</FONT></A><FONT=20
: > size=3D2>>
: >References: <BR>: ><</FONT><A=20
: >
href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
: > .com@lists.tapr.org"><FONT=20
: >
size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
: > ists.tapr.org</FONT></A><FONT=20
: > size=3D2>>
: >Organization: Digital Wireless
Corporation
:=20
: > >X-Priority: 3
: >X-MSMail-Priority: Normal
: >X-MimeOLE:
=
: >
: > Produced By Microsoft MimeOLE V5.50.4133.2400
: =
: > >X-MDaemon-Deliver-To:=20
: > </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&qu
ot;mailto:ss@lists.tapr.org""><FONT=20
: > size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
: > >X-Return-Path:=20
: > </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&qu
ot;mailto:pmcinnish@digiwrls.com""><FONT=20
: > size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
: > >List-Unsubscribe:=20
: > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3
D"mailto:leave-ss-6751T@lists.tapr.org""><FONT=20
: > size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
: > size=3D2>>
:=20
: > >List-Software: Lyris Server version 3.0
: >List-Subscribe:=20
: > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3
D"mailto:subscribe-ss@lists.tapr.org""><FONT=20
: > size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
: > size=3D2>>
:=20
: > >List-Owner: <</FONT><A =
: > href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
: > size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
: > size=3D2>>
:=20
: > >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20
: > href=3D"http://www.tapr.org"><FONT =
: > size=3D2>http://www.tapr.org</FONT></A><FONT=20
: > size=3D2>>
: >X-Message-Id:=20
: > <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: =
: > </FONT><A=20
: > href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: > size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT
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: >
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: >Also, their choice of the 900 MHz =
: > ISM band=20
: > is a horrible mistake... QRM,
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: >

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: > >product line=20
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: =
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: > Canada and Mexico (legally).
: >
: >73,
: >
: =
: > >Paul=20
: > McInnish - K4BET
: >Manager, Business Development
: >Digital
=
: >
: > Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
: > USA
:=20
: > >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
: > >Cellular=20
: > Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
: > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
: > ></FONT><A=20
: > href=3D"http://www.digital-wireless.com"><FONT=20
: > size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT size=3D2>:
=
: > >SSuRFnet=20
: > E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archi
ve/3D"mailto:k4bet@ssurfnet.com""><FONT=20
: > size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>: ></FONT><A
=
: >
: > href=3D"http://www.ssurfnet.com"><FONT=20
: > size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
: > >
: >Visit=20
: > with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August, =
: > 2000
:=20
: > >New Orleans, LA USA
: ></FONT><A=20
: > href=3D"http://www.isa.org/events/"><FONT=20
: > size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
: > >
:=20
: > >----- Original Message -----
: >From: "William C. Hast" =
: > <</FONT><A=20
: > href=3D"mailto:wchast@utilpart.com"><FONT=20
: > size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
: >To:
=
: > "TAPR Spread=20
: > Spectrum Special Interest Group" <</FONT><A=20
: > href=3D"mailto:ss@lists.tapr.org"><FONT =
: > size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: > size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
: > >Subject:=20
: > [ss] Right Direction
: >
: >
: >: Folks:
: >: =
: > These guys=20
: > are going the right direction, the just
: >: need to put in a real
=
: > SS RF=20
: > deck.
: >:
: >: Go take a look at it and see what you =
: > think.
:=20
: > >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/m
ail_archive/3D"http://www.cybiko.com/""><FONT=20
: > size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
: > >:
: >: I=20
: > think that they have the right concept. They
: >: just need to do
=
: > a bit of=20
: > work on it.
: >:
: >: ---
: >: You are currently =
: > subscribed to=20
: > ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D"mailto:k4bet@digital-wireless.com""><FONT=20
: > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: >:
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: > To=20
: > unsubscribe send a blank email to </FONT><A=20
: > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
: > >:
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: > >:
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: >
: >
: >---
: >You are =
: > currently=20
: > subscribed to ss as: </FONT><A =
: > href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: > size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>: >To =

: > unsubscribe=20
: > send a blank email to </FONT><A=20
: > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
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: > BR>:=20
: > Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
: > href=3D"http://www.hotmail.com"><FONT=20
: > size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>: =
: >
: ---
:=20
: > You are currently subscribed to ss as: </FONT><A=20
: > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: To =
: > unsubscribe=20
: > send a blank email to </FONT><A=20
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: > ------=_NextPart_000_04CC_01BFED85.B40939C0--
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: > ---
: >
: > END OF DIGEST
: >
: > ---
: > You are currently subscribed to ss as: ussailis@shaysnet.com
: > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] Spread Spectrum

From: GKadir@aol.com
Date: Mon, 17 Jul 2000 13:20:26 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-97077-2000.07.17-12.25.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi All

I don't if you can help me on an issue I am currently working on. I am
trying to use One VSAT antenna for 3 remote site in Bangladesh. Each site has
10 lines, and want to connect them so that they all link up with the main
site and use the one antenna. I also need to know can we use one multiplexer
at the main site and interconnect via spread spectrum or do we need 3
multipledxers each at one site. We are trying to connect our UK offices to
Bangladesh and want to know the best and cost effective way to do it. We
certainly don't want to put up 3 VSAT antenna each at one site, which
certainly will drive up our cost.

Thanking you in advance for your recommendations.

Kadir

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

37. [ss] Re: Spread Spectrum

From: Derek Lassen <kn6td@clubnet.net>
Date: Mon, 17 Jul 2000 13:10:18 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-97093-2000.07.17-15.16.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You left out three critical pieces of information:
How far are the remote sites from the central site?
Can the remote sites see the central site by radio line of sight?
How much thruput do you need (minimum and maximum).

A first cut WAG would be get 4 towers, 6 old WaveLAN 915 MHz cards (higher
power and cheap), 6 ten element 915MHz Yagi antennas, and 6 runs of Coax.

HTH.

(s) Derek

At 01:20 PM 7/17/00 -0400, GKadir@aol.com wrote:
>Hi All
>
>
>I don't if you can help me on an issue I am currently working on. I am
>trying to use One VSAT antenna for 3 remote site in Bangladesh. Each site has
>10 lines, and want to connect them so that they all link up with the main
>site and use the one antenna. I also need to know can we use one multiplexer
>at the main site and interconnect via spread spectrum or do we need 3
>multipledxers each at one site. We are trying to connect our UK offices to
>Bangladesh and want to know the best and cost effective way to do it. We
>certainly don't want to put up 3 VSAT antenna each at one site, which
>certainly will drive up our cost.
>
>
>
>Thanking you in advance for your recommendations.
>
>Kadir
>
>---
>You are currently subscribed to ss as: KN6TD@CLUBNET.NET
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

38. [ss] ARRL and TAPR 19th Annual Digital Communications Conference

From: "Steven R. Bible" <n7hpr@tapr.org>
Date: Wed, 19 Jul 2000 10:48:46 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-97382-2000.07.19-09.53.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information
Mark your calendar and start making plans to attend the year's premier
event in digital communications. The 19th Annual ARRL and TAPR
Digital Communications Conference will be held September 22-24, 2000,
in Orlando, Florida - just minutes from the Orlando International
Airport.

The ARRL and TAPR Digital Communications Conference is an
international forum for radio amateurs in digital communications,
networking, and related technologies to meet, publish their work, and
present new ideas and techniques for discussion. Presenters and
attendees will have the opportunity to exchange ideas and learn about
recent hardware and software advances, theories, experimental results,
and practical applications. The Digital Communications Conference is

not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be Lake Monroe Amateur Radio Society (http://www.qsl.net/lmars/),Orange County ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773), and Orlando Amateur Radio Club(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Call for Papers
Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by August 7th, 2000, and should be submitted to

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to

   lweinberg@arrl.org

Information on paper submission guidelines are available on-line at

http://www.tapr.org/dcc

Hotel
Conference presentations, meetings, and seminars will be held at the
Orlando Airport Marriott. It is highly recommended that you book your
room prior to arriving. A special DCC room rate of $89/single and
$89/double per night has been blocked for 50 rooms and is available
until September 1st, 2000. Once the 50 rooms have been reserved, room
rates will increase. So be sure to book your rooms early! The hotel
provides transportation to and from the Orlando International Airport.
Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
- TAPR Membership Meeting
- An event at which the most important new developments in amateur
  digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

There are few activities where your participation can be so much fun
and important! What a great way to share and renew your enthusiasm for
digital amateur radio! A get-together with colleagues and bringing
each other up to date on your latest work -- all this, and more, for
an unforgettable weekend of amateur radio and digital communications.
We hope to see you at the ARRL and TAPR Digital Communications
Conference on September 22-24, 2000!

Full information on the conference and hotel information can be
obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
Internet: http://www.tapr.org and tapr@tapr.org to register or for
additional information.

Conference Registration includes: Conference Proceedings, Sessions,
Meetings, and Lunch on Saturday.

See http://www.tapr.org/dcc for an on-line registration form or
text form for mailing or faxing.

A registration packet will be mailed in September upon receipt of
registration form and payment.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

39. [ss] Re: ss digest: July 17, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Wed, 19 Jul 2000 12:16:14 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-97412-2000.07.19-11.20.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

How do you deal with microwave oven interference at 2.45 GHz?

Jim Ussailis, W1EQO

On Tue, 18 Jul 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Monday, July 17, 2000.
>
> 1. Re: ss digest: July 14, 2000
> 2. Re: ss digest: July 14, 2000
> 3. Spread Spectrum
> 4. Re: Spread Spectrum
>
> ---
>
> Subject: Re: ss digest: July 14, 2000
> From: "Paul McInnish" <pmcinnish@digiwrls.com>
> Date: Mon, 17 Jul 2000 09:16:34 -0400
> X-Message-Number: 1
>
> Nope... not true in the DIGITAL spread spectrum world! A small amount of
> crud can cause havoc! Assume one is using a frequency hopping digital spread
> spectrum transceiver sending/receiving life support monitoring data... the
> throughput can be severely slowed down as the transceiver makes every effort
> to receive all the data and with all the error checking the transceiver is
> having to do... well, I sure would not want that!
>
> Or you are controlling several dozen fully automated robotic production
> lines... some dropped data, some erred data... some flawed data... the
> robotics either shuts down, goes havoc, etc., etc.....
>
> Critical digital data cannot tolerate trash! Even small amounts! And some
> speed requirements are also critical! Noise, interference & jamming slows
> the digital system down, dramatically. As I previously stated... the reasons
> we chose to get out of the 900 MHz ISM band is precisely because of all the
> noise & interference... even @ 2.4GHZ it is there but we control that with
> DSP, hard filtering, soft filtering, very sharp band skirts, etc. AND we can
> ship product all over the world! 900 MHz is restricted only to USA, Canada
> & Mexico!
>
> And ad-in-finitium!
>
> Paul McInnish - K4BET
> Manager, Business Development
> Digital Wireless Corp.
> One Meca Way
> Norcross, GA 30093, USA
> Pho: 770.564.5540, Ext. 2342
> Fax: 770.564.5541
> Cellular Phone: 678.429.2124
> OEM E-mail: k4bet@digital-wireless.com
> http://www.digital-wireless.com
> SSuRFnet E-mail: k4bet@ssurfnet.com
> http://www.ssurfnet.com
>
> Visit with us at ISA Expo 2000!
> Booth 1843
> 21 - 24 August, 2000
> New Orleans, LA USA
> http://www.isa.org/events/
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> New address (bigger and much nicer);
> Effective 14 August 2000:
>
> Digital Wireless Corporation
> 5375 Oakbrook Parkway
> Norcross, GA 30093 USA
> Pho: 678.684.2000
> Fax: 678.684.2001
>
> ----- Original Message -----
> From: "Chuck Hast" <kp4djt@tampabay.rr.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Sunday, July 16, 2000 2:31 AM
> Subject: [ss] Re: ss digest: July 14, 2000
>
>
> : I live in Tampa, and have looked at the 900 Mhz band, there is
> : some trash, but it is not that bad. I have some 900 MHz data links
> : on there, these are old discrete channel devices, seem to work
> : no problem too. Guess depending on your area your milage
> : may vary.
> :

> :
> : On Sat, 15 Jul 2000 20:43:36 -0400 (EDT), Jim Ussailis wrote:
> :
> : >Something I don't understand regarding intermod in the 900 MHz ISM
> band...
> : >
> : >Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and up.
> : >I don't doubt about the harmonics from TV stations in metro areas, but...
> : >
> : >I listed to the 900 MHz band almost daily, and hear nothing, or see
> : >nothing on the analyser. Of course I am in a rural area.
> : >
> : >We do have several pagers around 931. The rest of it is very quiet.
> : >
> : >
> : >Jim Ussailis, W1EQO
> : >
> : >National Wireless, Inc
> : >
> : >
> : >On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group digest
> wrote:
> : >
> : >> TAPR Spread Spectrum Special Interest Group Digest for Friday, July 14,
> 2000.
> : >>
> : >> 1. Re: Right Direction
> : >> 2. Re: Right Direction
> : >> 3. Re: Right Direction
> : >> 4. Re: Right Direction
> : >> 5. Re: Right Direction
> : >>
> : >> --
> : >>
> : >> Subject: Re: Right Direction
> : >> From: Derek Lassen <kn6td@clubnet.net>
> : >> Date: Fri, 14 Jul 2000 01:51:40 -0700
> : >> X-Message-Number: 1
> : >>
> : >> Anybody get one yet?
> : >> What's the processor?
> : >>
> : >> I wonder if there is a market for a game server / range extender (small
> : >> enough to stay in the backpack).
> : >>
> : >> :>
> : >>
> : >> (s) Derek
> : >>
> : >> At 10:03 PM 7/13/00 -0600, you wrote:
> : >> >I hate to rain on your parade, but going in the right direction for
> : >> >what? Wireless chat at 150'? If the person's that close I'll get up
> and
> : >> >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
> : >> >Palm. Internet? screen's kind of small ain't it? Games? I wish I had
> the
> : >> >time. Friend finder? Maybe it'll come in handy at the next Rolling
> : >> >Stones Concert. This is a toy if I've ever seen one. Maybe something
> fun
> : >> >for the kids. I can't imagine what I'd use it for. Someone obviously
> : >> >disagrees with me and has put beaucoup bucks into it to be able to
> sell
> : >> >the thing for $129. Maybe I'll get one for my kid for xmas.
> : >> >
> : >> >bah humbug
> : >> >
> : >> >--Dave
> : >> >
> : >> >"William C. Hast" wrote:
> : >> >
> : >> > > Folks:
> : >> > > These guys are going the right direction, the just
> : >> > > need to put in a real SS RF deck.
> : >> > >
> : >> > > Go take a look at it and see what you think.
> : >> > >
> : >> > > http://www.cybiko.com/
> : >> > >
> : >> > > I think that they have the right concept. They

> : >> > > just need to do a bit of work on it.
> : >> > >
> : >> > > ---
> : >> > > You are currently subscribed to ss as: depagnier@uswest.net
> : >> > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >> >
> : >> >
> : >> >---
> : >> >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
> : >> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >>
> : >>
> : >>
> : >> --
> : >>
> : >> Subject: Re: Right Direction
> : >> From: Derek Lassen <kn6td@clubnet.net>
> : >> Date: Fri, 14 Jul 2000 01:59:33 -0700
> : >> X-Message-Number: 2
> : >>
> : >> I just looked at the web site - I shoulda RTFM. Sorry.
> : >>
> : >> Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
> : >> seems to have a compact flash.
> : >>
> : >> RF communications is via 19k on 915 MHz GMSK.
> : >>
> : >> 73 de KN6TD
> : >>
> : >> (s) Derek
> : >>
> : >> At 01:51 AM 7/14/00 -0700, you wrote:
> : >> >Anybody get one yet?
> : >> >What's the processor?
> : >> >
> : >> >I wonder if there is a market for a game server / range extender
> (small
> : >> >enough to stay in the backpack).
> : >> >
> : >> >:>
> : >> >
> : >> >(s) Derek
> : >> >
> : >> >At 10:03 PM 7/13/00 -0600, you wrote:
> : >> >>I hate to rain on your parade, but going in the right direction for
> : >> >>what? Wireless chat at 150'? If the person's that close I'll get up
> and
> : >> >>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
> : >> >>Palm. Internet? screen's kind of small ain't it? Games? I wish I had
> the
> : >> >>time. Friend finder? Maybe it'll come in handy at the next Rolling
> : >> >>Stones Concert. This is a toy if I've ever seen one. Maybe something
> fun
> : >> >>for the kids. I can't imagine what I'd use it for. Someone obviously
> : >> >>disagrees with me and has put beaucoup bucks into it to be able to
> sell
> : >> >>the thing for $129. Maybe I'll get one for my kid for xmas.
> : >> >>
> : >> >>bah humbug
> : >> >>
> : >> >>--Dave
> : >> >>
> : >> >>"William C. Hast" wrote:
> : >> >>
> : >> >> > Folks:
> : >> >> > These guys are going the right direction, the just
> : >> >> > need to put in a real SS RF deck.
> : >> >> >
> : >> >> > Go take a look at it and see what you think.
> : >> >> >
> : >> >> > http://www.cybiko.com/
> : >> >> >
> : >> >> > I think that they have the right concept. They
> : >> >> > just need to do a bit of work on it.
> : >> >> >
> : >> >> > ---
> : >> >> > You are currently subscribed to ss as: depagnier@uswest.net
> : >> >> > To unsubscribe send a blank email to

> leave-ss-6751T@lists.tapr.org
> : >>
> : >>
> : >>
> : >> --
> : >>
> : >> Subject: Re: Right Direction
> : >> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> : >> Date: Fri, 14 Jul 2000 04:33:31 PDT
> : >> X-Message-Number: 3
> : >>
> : >> hey paul,
> : >>
> : >> I am student doing my masters in ee, my area of specilization is ss and
> : >> datacommunications.
> : >>
> : >> 1   you say all the intermod that is generated in this band is unreal
> : >> why is this?
> : >> 2 secondly what is reason of using 2.4ghz.
> : >> 3 Are you talking about wireless internet and data services ?
> : >>
> : >> thanking you
> : >> yours sincerely
> : >>
> : >>
> : >>
> : >> >From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : >> >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> <ss@lists.tapr.org>
> : >> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : >> >Subject: [ss] Re: Right Direction
> : >> >Date: Thu, 13 Jul 2000 16:22:39 -0400
> : >> >MIME-Version: 1.0
> : >> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> : >> >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
> : >> >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
> : >> >Return-Path: <PMcinnish@digiwrls.com>
> : >> >Message-ID:
> : >>
> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org
> >
> : >> >References:
> : >>
> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.
> org>
> : >> >Organization: Digital Wireless Corporation
> : >> >X-Priority: 3
> : >> >X-MSMail-Priority: Normal
> : >> >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
> : >> >X-MDaemon-Deliver-To: ss@lists.tapr.org
> : >> >X-Return-Path: pmcinnish@digiwrls.com
> : >> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> : >> >List-Software: Lyris Server version 3.0
> : >> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> : >> >List-Owner: <mailto:owner-ss@lists.tapr.org>
> : >> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> : >> >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
> : >> >Sender: bounce-ss-17222@lists.tapr.org
> : >> >Precedence: bulk
> : >> >
> : >> >Yep... NOT SS and range is limited to just a few feet!
> : >> >
> : >> >Also, their choice of the 900 MHz ISM band is a horrible mistake...
> QRM,
> : >> >QRN, and all the intermod generated that falls into this band is
> unreal!
> : >> >Main reason we discontinued all products in 900 MHz ISM band and went
> to
> : >> >2.4
> : >> >GHz ISM band... also allows us to ship world wide (very high
> acceptance of
> : >> >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold
> in
> : >> >USA, Canada and Mexico (legally).
> : >> >
> : >> >73,
> : >> >
> : >> >Paul McInnish - K4BET
> : >> >Manager, Business Development

> : >> >Digital Wireless Corp.
> : >> >One Meca Way
> : >> >Norcross, GA 30093, USA
> : >> >Pho: 770.564.5540, Ext. 2342
> : >> >Fax: 770.564.5541
> : >> >Cellular Phone: 678.429.2124
> : >> >OEM E-mail: k4bet@digital-wireless.com
> : >> >http://www.digital-wireless.com
> : >> >SSuRFnet E-mail: k4bet@ssurfnet.com
> : >> >http://www.ssurfnet.com
> : >> >
> : >> >Visit with us at ISA Expo 2000!
> : >> >Booth 1843
> : >> >21 - 24 August, 2000
> : >> >New Orleans, LA USA
> : >> >http://www.isa.org/events/
> : >> >
> : >> >----- Original Message -----
> : >> >From: "William C. Hast" <wchast@utilpart.com>
> : >> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : >> >Sent: Thursday, July 13, 2000 2:46 PM
> : >> >Subject: [ss] Right Direction
> : >> >
> : >> >
> : >> >: Folks:
> : >> >: These guys are going the right direction, the just
> : >> >: need to put in a real SS RF deck.
> : >> >:
> : >> >: Go take a look at it and see what you think.
> : >> >:
> : >> >: http://www.cybiko.com/
> : >> >:
> : >> >: I think that they have the right concept. They
> : >> >: just need to do a bit of work on it.
> : >> >:
> : >> >: ---
> : >> >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> : >> >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >> >:
> : >> >:
> : >> >
> : >> >
> : >> >
> : >> >---
> : >> >You are currently subscribed to ss as: venumadhavj@hotmail.com
> : >> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >> >
> : >>
> : >>
> ____
> : >> Get Your Private, Free E-mail from MSN Hotmail at
> http://www.hotmail.com
> : >>
> : >>
> : >> --
> : >>
> : >> Subject: Re: Right Direction
> : >> From: "Hast, Chuck" <wchast@utilpart.com>
> : >> Date: Fri, 14 Jul 2000 07:32:35 -0400
> : >> X-Message-Number: 4
> : >>
> : >> I called them and talked to them. They appear VERY open to
> : >> ideas and recommendations. Indeed the RF deck is a deck
> : >> out of a 900 MHz discrete channel phone (as told to me by
> : >> them) there are 30 selectable channels and according to the
> : >> propaganda each channel can support up to 100 interconnected
> : >> users.
> : >>
> : >> For those who do not think much of it, I guess it ain't much but
> : >> like my grandmomma said one day, "wish in one hand and spit
> : >> in the other and see which fills the fastest", some times I think
> : >> we do a lot of wishing and not enough spittin', so here we
> : >> stand empty handed, and some company out there is bringing
> : >> out the beginnings of the box we have been wishing for.
> : >>
> : >> In talking to them they sounded like the would like to develop
> : >> a device and a network concept that would be like the ricochet
> : >> system, or a cell like system, but they were VERY open to
> : >> ideas and recommendations.

> : >>
> : >> They also want to do voice, but do not handle it yet. I believe
> : >> the sound part is all there it is probably a software issue.
> : >>
> : >> I will repeat my self again, if we want to get some volume on
> : >> these things we are going to have to get the volume radio users
> : >> (voice users) involved, or I fear we will continue to spend a lot
> : >> of time wishing. I totally favor a data world, but reality is that
> : >> the world is a voice world, and the best way to get volume is
> : >> to convert that voice into a data stream and then do neat magic
> : >> with it that will make the voice users want to get on your system,
> : >> pay the (insert monetary unit here) to do so and keep from draining
> : >> YOUR pocket so much.
> : >>
> : >> Yes this box is crude and rude but, it is a start. I can probably do
> : >> better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
> : >> some software in there to handle the voice part and a access point
> : >> well place on top of my building to use it a few hundred yards from
> : >> the building, but the cost is now up there at over 1K USD.
> : >>
> : >> If they can keep the cost on this down near where it is now, and
> : >> still field a SS device that can work through a hub or SS repeater,
> : >> and carry a bit of power behind it (up to the 1 watt part 15 max)
> : >> then they are really going the right direction for the volume user.
> : >>
> : >> Go out and look at the web site, give them a call, or a e-mail and
> : >> see what you make of it.
> : >>
> : >>
> : >>
> : >>
> : >> --
> : >>
> : >> Subject: Re: Right Direction
> : >> From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : >> Date: Fri, 14 Jul 2000 11:21:49 -0400
> : >> X-Message-Number: 5
> : >>
> : >> This is a multi-part message in MIME format.
> : >>
> : >> ------=_NextPart_000_04CC_01BFED85.B40939C0
> : >> Content-Type: text/plain;
> : >> charset="Windows-1252"
> : >> Content-Transfer-Encoding: quoted-printable
> : >>
> : >> See response embedded below:
> : >>
> : >> Paul McInnish - K4BET
> : >> Manager, Business Development
> : >> Digital Wireless Corp.
> : >> One Meca Way
> : >> Norcross, GA 30093, USA
> : >> Pho: 770.564.5540, Ext. 2342
> : >> Fax: 770.564.5541
> : >> Cellular Phone: 678.429.2124
> : >> OEM E-mail: k4bet@digital-wireless.com
> : >> http://www.digital-wireless.com
> : >> SSuRFnet E-mail: k4bet@ssurfnet.com
> : >> http://www.ssurfnet.com
> : >>
> : >> Visit with us at ISA Expo 2000!
> : >> Booth 1843
> : >> 21 - 24 August, 2000
> : >> New Orleans, LA USA
> : >> http://www.isa.org/events/
> : >> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> : >> New address (bigger and much nicer);
> : >> Effective 14 August 2000:
> : >>
> : >> Digital Wireless Corporation
> : >> 5375 Oakbrook Parkway
> : >> Norcross, GA 30093 USA
> : >> Pho: 678.684.2000
> : >> Fax: 678.684.2001
> : >>
> : >> ----- Original Message -----=20
> : >> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> : >> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : >> Sent: Friday, July 14, 2000 7:33 AM

> : >> Subject: [ss] Re: Right Direction
> : >>
> : >>
> : >> : hey paul,
> : >> :=20
> : >> : I am student doing my masters in ee, my area of specilization is ss =
> : >> and=20
> : >> : datacommunications.
> : >> :=20
> : >> : 1   you say all the intermod that is generated in this band is unreal
> =
> : >>   =20
> : >> : why is this?
> : >> It is 2nd., 3rd. and 4th. order harmonics from paging systems, two-way
> =
> : >> radio systems, TV stations, microwave ovens, etc. We have taken =
> : >> (usually in larger metro areas, a spectrum analyzer and taken a look at
> =
> : >> 900 MHz ISM band... and the display looks like a "Prarie Grass field in
> =
> : >> a 50 mile per hour wind and majority of the 'jamming' signals are very
> =
> : >> high in amplitude. No way can critical data applications tolerate
> this. =
> : >> Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory =
> : >> Automation control?
> : >>
> : >> : 2 secondly what is reason of using 2.4ghz.
> : >> As I stated in my original message: "QRM, QRN, and all the intermod =
> : >> generated that falls into this band is unreal! Main reason we =
> : >> discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM =
> : >> band... also allows us to ship world wide (very high acceptance of =
> : >> product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold
> =
> : >> in USA, Canada and Mexico (legally)."
> : >>
> : >>
> : >> : 3 Are you talking about wireless internet and data services ?
> : >> Our core business is commercial and industrial and we took this proven
> =
> : >> and accepted OEM SS Transceiver Module and developed a line of ISP and
> =
> : >> Ethernet products.
> : >>
> : >> I am doing some neat things at home with some of our products... in the
> =
> : >> event my home ISP is monitoring this server. just expermenting when I =
> : >> tell this... "I have ADSL @ home & sending a full connection to/from =
> : >> daugher & son-in-law a mile away! By bridging my LAN at home with
> their =
> : >> LAN at their home!" Using a router so the ISP only sees one IP! (Also =
> : >> provides the firewall I need for security.)
> : >>
> : >> I hope the group does not object to any response such as this because I
> =
> : >> do not want to convert a 'ham radio oriented' list server into a =
> : >> commercial venture... however, I have a ball dealing in the SS world.
> =
> : >> Its fun!
> : >>
> : >> :=20
> : >> : thanking you
> : >> : yours sincerely
> : >> :=20
> : >> :=20
> : >> :=20
> : >> : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : >> : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
> : >> <ss@lists.tapr.org>
> : >> : >To: "TAPR Spread Spectrum Special Interest Group"
> <ss@lists.tapr.org>
> : >> : >Subject: [ss] Re: Right Direction
> : >> : >Date: Thu, 13 Jul 2000 16:22:39 -0400
> : >> : >MIME-Version: 1.0
> : >> : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id=20
> : >> : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
> : >> : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
> : >> : >Return-Path: <PMcinnish@digiwrls.com>
> : >> : >Message-ID:=20

> : >> : =
> : >>
> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
> : >> org>
> : >> : >References:=20
> : >> : =
> : >>
> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
> : >> pr.org>
> : >> : >Organization: Digital Wireless Corporation
> : >> : >X-Priority: 3
> : >> : >X-MSMail-Priority: Normal
> : >> : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
> : >> : >X-MDaemon-Deliver-To: ss@lists.tapr.org
> : >> : >X-Return-Path: pmcinnish@digiwrls.com
> : >> : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> : >> : >List-Software: Lyris Server version 3.0
> : >> : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> : >> : >List-Owner: <mailto:owner-ss@lists.tapr.org>
> : >> : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> : >> : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
> : >> : >Sender: bounce-ss-17222@lists.tapr.org
> : >> : >Precedence: bulk
> : >> : >
> : >> : >Yep... NOT SS and range is limited to just a few feet!
> : >> : >
> : >> : >Also, their choice of the 900 MHz ISM band is a horrible mistake...
> =
> : >> QRM,
> : >> : >QRN, and all the intermod generated that falls into this band is =
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> : >> : >Main reason we discontinued all products in 900 MHz ISM band and
> went =
> : >> to=20
> : >> : >2.4
> : >> : >GHz ISM band... also allows us to ship world wide (very high =
> : >> acceptance of
> : >> : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be =
> : >> sold in
> : >> : >USA, Canada and Mexico (legally).
> : >> : >
> : >> : >73,
> : >> : >
> : >> : >Paul McInnish - K4BET
> : >> : >Manager, Business Development
> : >> : >Digital Wireless Corp.
> : >> : >One Meca Way
> : >> : >Norcross, GA 30093, USA
> : >> : >Pho: 770.564.5540, Ext. 2342
> : >> : >Fax: 770.564.5541
> : >> : >Cellular Phone: 678.429.2124
> : >> : >OEM E-mail: k4bet@digital-wireless.com
> : >> : >http://www.digital-wireless.com
> : >> : >SSuRFnet E-mail: k4bet@ssurfnet.com
> : >> : >http://www.ssurfnet.com
> : >> : >
> : >> : >Visit with us at ISA Expo 2000!
> : >> : >Booth 1843
> : >> : >21 - 24 August, 2000
> : >> : >New Orleans, LA USA
> : >> : >http://www.isa.org/events/
> : >> : >
> : >> : >----- Original Message -----
> : >> : >From: "William C. Hast" <wchast@utilpart.com>
> : >> : >To: "TAPR Spread Spectrum Special Interest Group"
> <ss@lists.tapr.org>
> : >> : >Sent: Thursday, July 13, 2000 2:46 PM
> : >> : >Subject: [ss] Right Direction
> : >> : >
> : >> : >
> : >> : >: Folks:
> : >> : >: These guys are going the right direction, the just
> : >> : >: need to put in a real SS RF deck.
> : >> : >:
> : >> : >: Go take a look at it and see what you think.
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> : >> : >: http://www.cybiko.com/
> : >> : >:
> : >> : >: I think that they have the right concept. They

> : >> : >: just need to do a bit of work on it.
> : >> : >:
> : >> : >: ---
> : >> : >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> : >> : >: To unsubscribe send a blank email to
> leave-ss-6751T@lists.tapr.org
> : >> : >:
> : >> : >:
> : >> : >
> : >> : >
> : >> : >
> : >> : >---
> : >> : >You are currently subscribed to ss as: venumadhavj@hotmail.com
> : >> : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >> : >
> : >> :=20
> : >> : =
> : >>
> _____
> : >> : Get Your Private, Free E-mail from MSN Hotmail at =
> : >> http://www.hotmail.com
> : >> :=20
> : >> :=20
> : >> : ---
> : >> : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : >> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >> :=20
> : >> :=20
> : >>
> : >> ------=_NextPart_000_04CC_01BFED85.B40939C0
> : >> Content-Type: text/html;
> : >> charset="Windows-1252"
> : >> Content-Transfer-Encoding: quoted-printable
> : >>
> : >> <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
> : >> <HTML><HEAD>
> : >> <META content=3D"text/html; charset=3Dwindows-1252" =
> : >> http-equiv=3DContent-Type>
> : >> <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
> : >> <STYLE></STYLE>
> : >> </HEAD>
> : >> <BODY>
> : >> <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
> : >> <DIV> </DIV>
> : >> <DIV><FONT size=3D2>Paul McInnish - K4BET
Manager, Business=20
> : >> Development
Digital Wireless Corp.
One Meca Way
Norcross, GA =
> : >> 30093,=20
> : >> USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular =
> : >> Phone:=20
> : >> 678.429.2124
OEM E-mail: </FONT><A=20
> : >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> : >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<A=20
> : >> href=3D"http://www.digital-wireless.com"><FONT=20
> : >> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT =
> : >> size=3D2>SSuRFnet=20
> : >> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_ar
chive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
> : >> size=3D2>k4bet@ssurfnet.com</FONT></A>
<A =
> : >> href=3D"http://www.ssurfnet.com"><FONT=20
> : >> size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
> : >> <DIV> </DIV>
> : >> <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!
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21
> =
> : >> - 24=20
> : >> August, 2000
New Orleans, LA USA
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> : >> href=3D"http://www.isa.org/events/"><FONT=20
> : >> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT=20
> : >> size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
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> much=20
> : >> nicer);
Effective 14 August 2000:</FONT></DIV>
> : >> <DIV> </DIV>
> : >> <DIV><FONT size=3D2>Digital Wireless Corporation
5375 Oakbrook=20
> : >> Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax:=20
> : >> 678.684.2001
</FONT></DIV>
> : >> <DIV><FONT size=3D2>----- Original Message ----- </FONT>
> : >> <DIV><FONT size=3D2>From: "venumadhav josyula" <</FONT><A=20
> : >> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
> : >> size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
> : >> size=3D2>></FONT></DIV>

> : >> <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest
> Group"=20
> : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D"mailto:ss@lists.tapr.org""><FONT=20
> : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>></FONT></DIV>
> : >> <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
> : >> <DIV><FONT size=3D2>Subject: [ss] Re: Right
> Direction</FONT></DIV></DIV>
> : >> <DIV>
</DIV>
> : >> <DIV><FONT size=3D2>: hey paul,
: <BR>: I am student doing my
> masters =
> : >> in ee, my=20
> : >> area of specilization is ss and <BR>: datacommunications.
: <BR>:=20
> : >> 1   you say all the intermod that is generated in this band
> is =
> : >>
> : >> unreal
: why is this?</FONT></DIV>
> : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd. and =
> : >> 4th. order=20
> : >> harmonics from paging systems, two-way radio systems, TV stations, =
> : >> microwave=20
> : >> ovens, etc. We have taken (usually in larger metro areas, a =
> : >> spectrum=20
> : >> analyzer and taken a look at 900 MHz ISM band... and the display =
> : >> looks like=20
> : >> a "Prarie Grass field in a 50 mile per hour wind and majority of the =
> : >> 'jamming'=20
> : >> signals are very high in amplitude. No way can critical data =
> : >> applications=20
> : >> tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
> : >> monitoring?=20
> : >> Factory Automation control?</EM></STRONG></FONT></DIV>
> : >> <DIV><FONT size=3D2>
: 2 secondly what is reason of using=20
> : >> 2.4ghz.</FONT></DIV>
> : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
> : >> original message:=20
> : >> "QRM, QRN, and all the intermod generated that falls into this
> band =
> : >> is=20
> : >> unreal! Main reason we discontinued all products in 900 MHz ISM band
> and =
> : >> went=20
> : >> to 2.4GHz ISM band... also allows us to ship world wide (very
> high=20
> : >> acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can
> =
> : >> ONLY be=20
> : >> sold in USA, Canada and Mexico =
> : >> (legally)."
</EM></STRONG></FONT></DIV>
> : >> <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
> : >> internet and data=20
> : >> services ?</FONT></DIV>
> : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is =
> : >> commercial and=20
> : >> industrial and we took this proven and accepted OEM SS Transceiver
> =
> : >> Module=20
> : >> and developed a line of ISP and Ethernet =
> : >> products.</EM></STRONG></FONT></DIV>
> : >> <DIV> </DIV>
> : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some neat =
> : >> things at home=20
> : >> with some of our products... in the event my home ISP is monitoring
> this =
> : >> server.=20
> : >> just expermenting when I tell this... "I have ADSL @ home & sending
> =
> : >> a full=20
> : >> connection to/from daugher & son-in-law a mile away! By
> =
> : >> bridging=20
> : >> my LAN at home with their LAN at their home!" Using a router so the ISP
> =
> : >> only=20
> : >> sees one IP! (Also provides the firewall I need for=20
> : >> security.)</EM></STRONG></FONT></DIV>
> : >> <DIV> </DIV>
> : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group does =
> : >> not object=20

> : >> to any response such as this because I do not want to convert a =
> : >> 'ham radio=20
> : >> oriented' list server into a commercial venture... however, I have a =
> : >> ball=20
> : >> dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
> : >> <DIV><FONT size=3D2>
: <BR>: thanking you
: yours sincerely
:
> =
> : >>
: <BR>:=20
> : >>
: >From: "Paul McInnish" <</FONT><A=20
> : >> href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
> : >> size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
> : >> >Reply-To:=20
> : >> "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
> : >> href=3D"mailto:ss@lists.tapr.org"><FONT =
> : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
> : >> size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest
> Group" =
> : >>
> : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D"mailto:ss@lists.tapr.org""><FONT=20
> : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
> : >> >Subject: [ss] Re:=20
> : >> Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
:=20
> : >> >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
> : >> hotmail.com=20
> : >> (3.2) with ESMTP id <BR>:
> >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; =
> : >> Thu Jul=20
> : >> 13 13:26:12 2000
: >From </FONT><A=20
> : >> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
> : >> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2> Thu =
> : >> Jul 13=20
> : >> 13:28:28 2000
: >Return-Path: <</FONT><A=20
> : >> href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
> : >> size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
> : >> >Message-ID:=20
> : >>
: ><</FONT><A=20
> : >>
> href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
> : >> m@lists.tapr.org"><FONT=20
> : >>
> size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
> : >> s.tapr.org</FONT></A><FONT=20
> : >> size=3D2>>
: >References: <BR>: ><</FONT><A=20
> : >>
> href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
> : >> .com@lists.tapr.org"><FONT=20
> : >>
> size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
> : >> ists.tapr.org</FONT></A><FONT=20
> : >> size=3D2>>
: >Organization: Digital Wireless
> Corporation
:=20
> : >> >X-Priority: 3
: >X-MSMail-Priority: Normal
:
> >X-MimeOLE: =
> : >>
> : >> Produced By Microsoft MimeOLE V5.50.4133.2400
: =
> : >> >X-MDaemon-Deliver-To:=20
> : >> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D
"mailto:ss@lists.tapr.org""><FONT=20
> : >> size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> : >> >X-Return-Path:=20
> : >> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D
"mailto:pmcinnish@digiwrls.com""><FONT=20
> : >> size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
> : >> >List-Unsubscribe:=20
> : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D"mailto:leave-ss-6751T@lists.tapr.org""><FONT=20
> : >> size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
> : >> size=3D2>>
:=20
> : >> >List-Software: Lyris Server version 3.0
: >List-Subscribe:=20
> : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archiv
e/3D"mailto:subscribe-ss@lists.tapr.org""><FONT=20
> : >> size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
> : >> size=3D2>>
:=20
> : >> >List-Owner: <</FONT><A =
> : >> href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
> : >> size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
> : >> size=3D2>>
:=20
> : >> >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20

> : >> href=3D"http://www.tapr.org"><FONT =
> : >> size=3D2>http://www.tapr.org</FONT></A><FONT=20
> : >> size=3D2>>
: >X-Message-Id:=20
> : >> <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: =
> : >> </FONT><A=20
> : >> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
> : >> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT
> size=3D2>:=20
> : >> >Precedence: bulk
: >
: >Yep... NOT SS and range is =
> : >> limited to=20
> : >> just a few feet!
: >
: >Also, their choice of the 900 MHz =
> : >> ISM band=20
> : >> is a horrible mistake... QRM,
: >QRN, and all the intermod =
> : >> generated that=20
> : >> falls into this band is unreal!
: >Main reason we discontinued
> all =
> : >>
> : >> products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz ISM
> =
> : >> band...=20
> : >> also allows us to ship world wide (very high acceptance of
: =
> : >> >product line=20
> : >> now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
> : >> >USA,=20
> : >> Canada and Mexico (legally).
: >
: >73,
: >
: =
> : >> >Paul=20
> : >> McInnish - K4BET
: >Manager, Business Development
:
> >Digital =
> : >>
> : >> Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
> : >> USA
:=20
> : >> >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
> : >> >Cellular=20
> : >> Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
> : >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> : >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
> : >> ></FONT><A=20
> : >> href=3D"http://www.digital-wireless.com"><FONT=20
> : >> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT size=3D2>:
> =
> : >> >SSuRFnet=20
> : >> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_ar
chive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
> : >> size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>:
> ></FONT><A =
> : >>
> : >> href=3D"http://www.ssurfnet.com"><FONT=20
> : >> size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
> : >> >
: >Visit=20
> : >> with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August,
> =
> : >> 2000
:=20
> : >> >New Orleans, LA USA
: ></FONT><A=20
> : >> href=3D"http://www.isa.org/events/"><FONT=20
> : >> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
> : >> >
:=20
> : >> >----- Original Message -----
: >From: "William C. Hast" =
> : >> <</FONT><A=20
> : >> href=3D"mailto:wchast@utilpart.com"><FONT=20
> : >> size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
: >To:
> =
> : >> "TAPR Spread=20
> : >> Spectrum Special Interest Group" <</FONT><A=20
> : >> href=3D"mailto:ss@lists.tapr.org"><FONT =
> : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
> : >> size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
> : >> >Subject:=20
> : >> [ss] Right Direction
: >
: >
: >: Folks:
: >: =
> : >> These guys=20
> : >> are going the right direction, the just
: >: need to put in a
> real =
> : >> SS RF=20
> : >> deck.
: >:
: >: Go take a look at it and see what you =
> : >> think.
:=20
> : >> >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-si
g/mail_archive/3D"http://www.cybiko.com/""><FONT=20
> : >> size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
> : >> >:
: >: I=20
> : >> think that they have the right concept. They
: >: just need to do

> =
> : >> a bit of=20
> : >> work on it.
: >:
: >: ---
: >: You are currently =
> : >> subscribed to=20
> : >> ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arc
hive/3D"mailto:k4bet@digital-wireless.com""><FONT=20
> : >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>:
> >: =
> : >> To=20
> : >> unsubscribe send a blank email to </FONT><A=20
> : >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> : >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>:
> =
> : >> >:
:=20
> : >> >:
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: >
: >
: >---
: >You are =
> : >> currently=20
> : >> subscribed to ss as: </FONT><A =
> : >> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
> : >> size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>: >To
> =
> : >> unsubscribe=20
> : >> send a blank email to </FONT><A=20
> : >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> : >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>:
> =
> : >> >
:=20
> : >>
:=20
> : >>
> _____<=
> : >> BR>:=20
> : >> Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
> : >> href=3D"http://www.hotmail.com"><FONT=20
> : >> size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>: =
> : >>
: ---
:=20
> : >> You are currently subscribed to ss as: </FONT><A=20
> : >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> : >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: To =
> : >> unsubscribe=20
> : >> send a blank email to </FONT><A=20
> : >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> : >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>:
> =
> : >>
:=20
> : >> </FONT></DIV></BODY></HTML>
> : >>
> : >> ------=_NextPart_000_04CC_01BFED85.B40939C0--
> : >>
> : >>
> : >>
> : >>
> : >>
> : >> ---
> : >>
> : >> END OF DIGEST
> : >>
> : >> ---
> : >> You are currently subscribed to ss as: ussailis@shaysnet.com
> : >> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >>
> : >>
> : >
> : >---
> : >You are currently subscribed to ss as: kp4djt@tampabay.rr.com
> : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >
> :
> : Chuck Hast   e-mail   kp4djt@tampabay.rr.com
> :
> :   ---- FPAC ----
> : www.qsl.net/fpac/
> :
> :
> : ---
> : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> :
> :
>
>

>
> --
>
> Subject: Re: ss digest: July 14, 2000
> From: "Paul McInnish" <pmcinnish@digiwrls.com>
> Date: Mon, 17 Jul 2000 09:27:11 -0400
> X-Message-Number: 2
>
> Jim... you probably are not listening to the various microwave ovens that we
> have gone out & purchased, off the shelf @ local consumer outlets, put them
> on the bench & plug them in! Man... their local oscillators (WHICH DO NOT
> OPERATE @ THE OUTPUT FREQUENCIES) are radiating birdies all over the
> place... some at very high levels and exceeding FCC allowable limits!
>
> The whole world has paging systems operating in the 400 MHz band... the
> keyless entry, MTS paging, (some of these systems run 300 watts ERP) etc.,
> etc. are in the high end of 450 - 500 MHz.... simple math times two puts the
> first harmonic in the 900 ISM band... other frequencies falling right out
> side (above - below the 900 MHz band) beating with other services also
> creates a ton of crud!
>
> The uses for the digital SS technology in a rural area is very remote...
>
> Paul McInnish - K4BET
> Manager, Business Development
> Digital Wireless Corp.
> One Meca Way
> Norcross, GA 30093, USA
> Pho: 770.564.5540, Ext. 2342
> Fax: 770.564.5541
> Cellular Phone: 678.429.2124
> OEM E-mail: k4bet@digital-wireless.com
> http://www.digital-wireless.com
> SSuRFnet E-mail: k4bet@ssurfnet.com
> http://www.ssurfnet.com
>
> Visit with us at ISA Expo 2000!
> Booth 1843
> 21 - 24 August, 2000
> New Orleans, LA USA
> http://www.isa.org/events/
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> New address (bigger and much nicer);
> Effective 14 August 2000:
>
> Digital Wireless Corporation
> 5375 Oakbrook Parkway
> Norcross, GA 30093 USA
> Pho: 678.684.2000
> Fax: 678.684.2001
>
> ----- Original Message -----
> From: "Jim Ussailis" <ussailis@equinox.shaysnet.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Cc: "ss digest recipients" <ss@lists.tapr.org>
> Sent: Saturday, July 15, 2000 8:43 PM
> Subject: [ss] Re: ss digest: July 14, 2000
>
>
> : Something I don't understand regarding intermod in the 900 MHz ISM band...
> :
> : Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and up.
> : I don't doubt about the harmonics from TV stations in metro areas, but...
> :
> : I listed to the 900 MHz band almost daily, and hear nothing, or see
> : nothing on the analyser. Of course I am in a rural area.
> :
> : We do have several pagers around 931. The rest of it is very quiet.
> :
> :
> : Jim Ussailis, W1EQO
> :
> : National Wireless, Inc
> :
> :
> : On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group digest
> wrote:
> :
> : > TAPR Spread Spectrum Special Interest Group Digest for Friday, July 14,

> 2000.
> : >
> : > 1. Re: Right Direction
> : > 2. Re: Right Direction
> : > 3. Re: Right Direction
> : > 4. Re: Right Direction
> : > 5. Re: Right Direction
> : >
> : > --
> : >
> : > Subject: Re: Right Direction
> : > From: Derek Lassen <kn6td@clubnet.net>
> : > Date: Fri, 14 Jul 2000 01:51:40 -0700
> : > X-Message-Number: 1
> : >
> : > Anybody get one yet?
> : > What's the processor?
> : >
> : > I wonder if there is a market for a game server / range extender (small
> : > enough to stay in the backpack).
> : >
> : > :>
> : >
> : > (s) Derek
> : >
> : > At 10:03 PM 7/13/00 -0600, you wrote:
> : > >I hate to rain on your parade, but going in the right direction for
> : > >what? Wireless chat at 150'? If the person's that close I'll get up and
> : > >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
> : > >Palm. Internet? screen's kind of small ain't it? Games? I wish I had
> the
> : > >time. Friend finder? Maybe it'll come in handy at the next Rolling
> : > >Stones Concert. This is a toy if I've ever seen one. Maybe something
> fun
> : > >for the kids. I can't imagine what I'd use it for. Someone obviously
> : > >disagrees with me and has put beaucoup bucks into it to be able to sell
> : > >the thing for $129. Maybe I'll get one for my kid for xmas.
> : > >
> : > >bah humbug
> : > >
> : > >--Dave
> : > >
> : > >"William C. Hast" wrote:
> : > >
> : > > > Folks:
> : > > > These guys are going the right direction, the just
> : > > > need to put in a real SS RF deck.
> : > > >
> : > > > Go take a look at it and see what you think.
> : > > >
> : > > > http://www.cybiko.com/
> : > > >
> : > > > I think that they have the right concept. They
> : > > > just need to do a bit of work on it.
> : > > >
> : > > > ---
> : > > > You are currently subscribed to ss as: depagnier@uswest.net
> : > > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : > >
> : > >
> : > >---
> : > >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
> : > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >
> : >
> : >
> : > --
> : >
> : > Subject: Re: Right Direction
> : > From: Derek Lassen <kn6td@clubnet.net>
> : > Date: Fri, 14 Jul 2000 01:59:33 -0700
> : > X-Message-Number: 2
> : >
> : > I just looked at the web site - I shoulda RTFM. Sorry.
> : >
> : > Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash. It
> : > seems to have a compact flash.
> : >
> : > RF communications is via 19k on 915 MHz GMSK.

> : >
> : > 73 de KN6TD
> : >
> : > (s) Derek
> : >
> : > At 01:51 AM 7/14/00 -0700, you wrote:
> : > >Anybody get one yet?
> : > >What's the processor?
> : > >
> : > >I wonder if there is a market for a game server / range extender (small
> : > >enough to stay in the backpack).
> : > >
> : > >:>
> : > >
> : > >(s) Derek
> : > >
> : > >At 10:03 PM 7/13/00 -0600, you wrote:
> : > >>I hate to rain on your parade, but going in the right direction for
> : > >>what? Wireless chat at 150'? If the person's that close I'll get up
> and
> : > >>talk to them eye to eye. Organizer? Maybe... but it's bigger than a
> : > >>Palm. Internet? screen's kind of small ain't it? Games? I wish I had
> the
> : > >>time. Friend finder? Maybe it'll come in handy at the next Rolling
> : > >>Stones Concert. This is a toy if I've ever seen one. Maybe something
> fun
> : > >>for the kids. I can't imagine what I'd use it for. Someone obviously
> : > >>disagrees with me and has put beaucoup bucks into it to be able to
> sell
> : > >>the thing for $129. Maybe I'll get one for my kid for xmas.
> : > >>
> : > >>bah humbug
> : > >>
> : > >>--Dave
> : > >>
> : > >>"William C. Hast" wrote:
> : > >>
> : > >> > Folks:
> : > >> > These guys are going the right direction, the just
> : > >> > need to put in a real SS RF deck.
> : > >> >
> : > >> > Go take a look at it and see what you think.
> : > >> >
> : > >> > http://www.cybiko.com/
> : > >> >
> : > >> > I think that they have the right concept. They
> : > >> > just need to do a bit of work on it.
> : > >> >
> : > >> > ---
> : > >> > You are currently subscribed to ss as: depagnier@uswest.net
> : > >> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >
> : >
> : >
> : > --
> : >
> : > Subject: Re: Right Direction
> : > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> : > Date: Fri, 14 Jul 2000 04:33:31 PDT
> : > X-Message-Number: 3
> : >
> : > hey paul,
> : >
> : > I am student doing my masters in ee, my area of specilization is ss and
> : > datacommunications.
> : >
> : > 1   you say all the intermod that is generated in this band is unreal
> : > why is this?
> : > 2 secondly what is reason of using 2.4ghz.
> : > 3 Are you talking about wireless internet and data services ?
> : >
> : > thanking you
> : > yours sincerely
> : >
> : >
> : >
> : > >From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> <ss@lists.tapr.org>

> : > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : > >Subject: [ss] Re: Right Direction
> : > >Date: Thu, 13 Jul 2000 16:22:39 -0400
> : > >MIME-Version: 1.0
> : > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> : > >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
> : > >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
> : > >Return-Path: <PMcinnish@digiwrls.com>
> : > >Message-ID:
> : >
> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org
> >
> : > >References:
> : >
> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.
> org>
> : > >Organization: Digital Wireless Corporation
> : > >X-Priority: 3
> : > >X-MSMail-Priority: Normal
> : > >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
> : > >X-MDaemon-Deliver-To: ss@lists.tapr.org
> : > >X-Return-Path: pmcinnish@digiwrls.com
> : > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> : > >List-Software: Lyris Server version 3.0
> : > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> : > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> : > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> : > >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
> : > >Sender: bounce-ss-17222@lists.tapr.org
> : > >Precedence: bulk
> : > >
> : > >Yep... NOT SS and range is limited to just a few feet!
> : > >
> : > >Also, their choice of the 900 MHz ISM band is a horrible mistake...
> QRM,
> : > >QRN, and all the intermod generated that falls into this band is
> unreal!
> : > >Main reason we discontinued all products in 900 MHz ISM band and went
> to
> : > >2.4
> : > >GHz ISM band... also allows us to ship world wide (very high acceptance
> of
> : > >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold
> in
> : > >USA, Canada and Mexico (legally).
> : > >
> : > >73,
> : > >
> : > >Paul McInnish - K4BET
> : > >Manager, Business Development
> : > >Digital Wireless Corp.
> : > >One Meca Way
> : > >Norcross, GA 30093, USA
> : > >Pho: 770.564.5540, Ext. 2342
> : > >Fax: 770.564.5541
> : > >Cellular Phone: 678.429.2124
> : > >OEM E-mail: k4bet@digital-wireless.com
> : > >http://www.digital-wireless.com
> : > >SSuRFnet E-mail: k4bet@ssurfnet.com
> : > >http://www.ssurfnet.com
> : > >
> : > >Visit with us at ISA Expo 2000!
> : > >Booth 1843
> : > >21 - 24 August, 2000
> : > >New Orleans, LA USA
> : > >http://www.isa.org/events/
> : > >
> : > >----- Original Message -----
> : > >From: "William C. Hast" <wchast@utilpart.com>
> : > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : > >Sent: Thursday, July 13, 2000 2:46 PM
> : > >Subject: [ss] Right Direction
> : > >
> : > >
> : > >: Folks:
> : > >: These guys are going the right direction, the just
> : > >: need to put in a real SS RF deck.
> : > >:
> : > >: Go take a look at it and see what you think.

> : > >:
> : > >: http://www.cybiko.com/
> : > >:
> : > >: I think that they have the right concept. They
> : > >: just need to do a bit of work on it.
> : > >:
> : > >: ---
> : > >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> : > >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : > >:
> : > >:
> : > >
> : > >
> : > >
> : > >---
> : > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> : > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : > >
> : >
> : > _____
> : > Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
> : >
> : >
> : > ----------
> : >
> : > Subject: Re: Right Direction
> : > From: "Hast, Chuck" <wchast@utilpart.com>
> : > Date: Fri, 14 Jul 2000 07:32:35 -0400
> : > X-Message-Number: 4
> : >
> : > I called them and talked to them. They appear VERY open to
> : > ideas and recommendations. Indeed the RF deck is a deck
> : > out of a 900 MHz discrete channel phone (as told to me by
> : > them) there are 30 selectable channels and according to the
> : > propaganda each channel can support up to 100 interconnected
> : > users.
> : >
> : > For those who do not think much of it, I guess it ain't much but
> : > like my grandmomma said one day, "wish in one hand and spit
> : > in the other and see which fills the fastest", some times I think
> : > we do a lot of wishing and not enough spittin', so here we
> : > stand empty handed, and some company out there is bringing
> : > out the beginnings of the box we have been wishing for.
> : >
> : > In talking to them they sounded like the would like to develop
> : > a device and a network concept that would be like the ricochet
> : > system, or a cell like system, but they were VERY open to
> : > ideas and recommendations.
> : >
> : > They also want to do voice, but do not handle it yet. I believe
> : > the sound part is all there it is probably a software issue.
> : >
> : > I will repeat my self again, if we want to get some volume on
> : > these things we are going to have to get the volume radio users
> : > (voice users) involved, or I fear we will continue to spend a lot
> : > of time wishing. I totally favor a data world, but reality is that
> : > the world is a voice world, and the best way to get volume is
> : > to convert that voice into a data stream and then do neat magic
> : > with it that will make the voice users want to get on your system,
> : > pay the (insert monetary unit here) to do so and keep from draining
> : > YOUR pocket so much.
> : >
> : > Yes this box is crude and rude but, it is a start. I can probably do
> : > better with a Casio Cassiopeia (sp?) with a PC card slot full of radio,
> : > some software in there to handle the voice part and a access point
> : > well place on top of my building to use it a few hundred yards from
> : > the building, but the cost is now up there at over 1K USD.
> : >
> : > If they can keep the cost on this down near where it is now, and
> : > still field a SS device that can work through a hub or SS repeater,
> : > and carry a bit of power behind it (up to the 1 watt part 15 max)
> : > then they are really going the right direction for the volume user.
> : >
> : > Go out and look at the web site, give them a call, or a e-mail and
> : > see what you make of it.
> : >
> : >
> : >
> : >

> : > --
> : >
> : > Subject: Re: Right Direction
> : > From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : > Date: Fri, 14 Jul 2000 11:21:49 -0400
> : > X-Message-Number: 5
> : >
> : > This is a multi-part message in MIME format.
> : >
> : > ------=_NextPart_000_04CC_01BFED85.B40939C0
> : > Content-Type: text/plain;
> : > charset="Windows-1252"
> : > Content-Transfer-Encoding: quoted-printable
> : >
> : > See response embedded below:
> : >
> : > Paul McInnish - K4BET
> : > Manager, Business Development
> : > Digital Wireless Corp.
> : > One Meca Way
> : > Norcross, GA 30093, USA
> : > Pho: 770.564.5540, Ext. 2342
> : > Fax: 770.564.5541
> : > Cellular Phone: 678.429.2124
> : > OEM E-mail: k4bet@digital-wireless.com
> : > http://www.digital-wireless.com
> : > SSuRFnet E-mail: k4bet@ssurfnet.com
> : > http://www.ssurfnet.com
> : >
> : > Visit with us at ISA Expo 2000!
> : > Booth 1843
> : > 21 - 24 August, 2000
> : > New Orleans, LA USA
> : > http://www.isa.org/events/
> : > ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> : > New address (bigger and much nicer);
> : > Effective 14 August 2000:
> : >
> : > Digital Wireless Corporation
> : > 5375 Oakbrook Parkway
> : > Norcross, GA 30093 USA
> : > Pho: 678.684.2000
> : > Fax: 678.684.2001
> : >
> : > ----- Original Message -----=20
> : > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> : > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : > Sent: Friday, July 14, 2000 7:33 AM
> : > Subject: [ss] Re: Right Direction
> : >
> : >
> : > : hey paul,
> : > :=20
> : > : I am student doing my masters in ee, my area of specilization is ss =
> : > and=20
> : > : datacommunications.
> : > :=20
> : > : 1   you say all the intermod that is generated in this band is unreal
> : > =
> : > :   =20
> : > : why is this?
> : > It is 2nd., 3rd. and 4th. order harmonics from paging systems, two-way =
> : > radio systems, TV stations, microwave ovens, etc. We have taken =
> : > (usually in larger metro areas, a spectrum analyzer and taken a look at
> : > =
> : > 900 MHz ISM band... and the display looks like a "Prarie Grass field in
> : > =
> : > a 50 mile per hour wind and majority of the 'jamming' signals are very =
> : > high in amplitude. No way can critical data applications tolerate this.
> : > =
> : > Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory =
> : > Automation control?
> : >
> : > : 2 secondly what is reason of using 2.4ghz.
> : > As I stated in my original message: "QRM, QRN, and all the intermod =
> : > generated that falls into this band is unreal! Main reason we =
> : > discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM =
> : > band... also allows us to ship world wide (very high acceptance of =
> : > product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold =

> : > in USA, Canada and Mexico (legally)."
> : >
> : >
> : > : 3 Are you talking about wireless internet and data services ?
> : > Our core business is commercial and industrial and we took this proven =
> : > and accepted OEM SS Transceiver Module and developed a line of ISP and =
> : > Ethernet products.
> : >
> : > I am doing some neat things at home with some of our products... in the
> =
> : > event my home ISP is monitoring this server. just expermenting when I =
> : > tell this... "I have ADSL @ home & sending a full connection to/from =
> : > daugher & son-in-law a mile away! By bridging my LAN at home with their
> =
> : > LAN at their home!" Using a router so the ISP only sees one IP! (Also =
> : > provides the firewall I need for security.)
> : >
> : > I hope the group does not object to any response such as this because I
> =
> : > do not want to convert a 'ham radio oriented' list server into a =
> : > commercial venture... however, I have a ball dealing in the SS world. =
> : > Its fun!
> : >
> : > :=20
> : > : thanking you
> : > : yours sincerely
> : > :=20
> : > :=20
> : > :=20
> : > : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
> : > : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
> : > <ss@lists.tapr.org>
> : > : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : > : >Subject: [ss] Re: Right Direction
> : > : >Date: Thu, 13 Jul 2000 16:22:39 -0400
> : > : >MIME-Version: 1.0
> : > : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id=20
> : > : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
> : > : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
> : > : >Return-Path: <PMcinnish@digiwrls.com>
> : > : >Message-ID:=20
> : > : =
> : >
> ><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
> : > org>
> : > : >References:=20
> : > : =
> : >
> ><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
> : > pr.org>
> : > : >Organization: Digital Wireless Corporation
> : > : >X-Priority: 3
> : > : >X-MSMail-Priority: Normal
> : > : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
> : > : >X-MDaemon-Deliver-To: ss@lists.tapr.org
> : > : >X-Return-Path: pmcinnish@digiwrls.com
> : > : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> : > : >List-Software: Lyris Server version 3.0
> : > : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> : > : >List-Owner: <mailto:owner-ss@lists.tapr.org>
> : > : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> : > : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
> : > : >Sender: bounce-ss-17222@lists.tapr.org
> : > : >Precedence: bulk
> : > : >
> : > : >Yep... NOT SS and range is limited to just a few feet!
> : > : >
> : > : >Also, their choice of the 900 MHz ISM band is a horrible mistake... =
> : > QRM,
> : > : >QRN, and all the intermod generated that falls into this band is =
> : > unreal!
> : > : >Main reason we discontinued all products in 900 MHz ISM band and went
> =
> : > to=20
> : > : >2.4
> : > : >GHz ISM band... also allows us to ship world wide (very high =
> : > acceptance of
> : > : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be =
> : > sold in

```
> : > : >USA, Canada and Mexico (legally).
> : > : >
> : > : >73,
> : > : >
> : > : >Paul McInnish - K4BET
> : > : >Manager, Business Development
> : > : >Digital Wireless Corp.
> : > : >One Meca Way
> : > : >Norcross, GA 30093, USA
> : > : >Pho: 770.564.5540, Ext. 2342
> : > : >Fax: 770.564.5541
> : > : >Cellular Phone: 678.429.2124
> : > : >OEM E-mail: k4bet@digital-wireless.com
> : > : >http://www.digital-wireless.com
> : > : >SSuRFnet E-mail: k4bet@ssurfnet.com
> : > : >http://www.ssurfnet.com
> : > : >
> : > : >Visit with us at ISA Expo 2000!
> : > : >Booth 1843
> : > : >21 - 24 August, 2000
> : > : >New Orleans, LA USA
> : > : >http://www.isa.org/events/
> : > : >
> : > : >----- Original Message -----
> : > : >From: "William C. Hast" <wchast@utilpart.com>
> : > : >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> : > : >Sent: Thursday, July 13, 2000 2:46 PM
> : > : >Subject: [ss] Right Direction
> : > : >
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> : > : >: Folks:
> : > : >: These guys are going the right direction, the just
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> : > : >:
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> : > : >:
> : > : >: I think that they have the right concept. They
> : > : >: just need to do a bit of work on it.
> : > : >:
> : > : >: ---
> : > : >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> : > : >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : > : >:
> : > : >:
> : > : >
> : > : >
> : > : >
> : > : >---
> : > : >You are currently subscribed to ss as: venumadhavj@hotmail.com
> : > : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : > : >
> : > :=20
> : > : =
> : > _________________________________________________________________
> : > : Get Your Private, Free E-mail from MSN Hotmail at =
> : > http://www.hotmail.com
> : > :=20
> : > :=20
> : > : ---
> : > : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : > : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : > :=20
> : > :=20
> : > 
> : > ------=_NextPart_000_04CC_01BFED85.B40939C0
> : > Content-Type: text/html;
> : > charset="Windows-1252"
> : > Content-Transfer-Encoding: quoted-printable
> : > 
> : > <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
> : > <HTML><HEAD>
> : > <META content=3D"text/html; charset=3Dwindows-1252" =
> : > http-equiv=3DContent-Type>
> : > <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
> : > <STYLE></STYLE>
> : > </HEAD>
> : > <BODY>
```

> : > <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
> : > <DIV> </DIV>
> : > <DIV><FONT size=3D2>Paul McInnish - K4BET
Manager, Business=20
> : > Development
Digital Wireless Corp.
One Meca Way
Norcross, GA =
> : > 30093,=20
> : > USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular =
> : > Phone:=20
> : > 678.429.2124
OEM E-mail: </FONT><A=20
> : > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<A=20
> : > href=3D"http://www.digital-wireless.com"><FONT=20
> : > size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT =
> : > size=3D2>SSuRFnet=20
> : > E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arc
hive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
> : > size=3D2>k4bet@ssurfnet.com</FONT></A>
<A =
> : > href=3D"http://www.ssurfnet.com"><FONT=20
> : > size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
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> : > <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!
Booth 1843
21
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> : > - 24=20
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New Orleans, LA USA
</FONT><A=20
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<FONT=20
> : > size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
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Effective 14 August 2000:</FONT></DIV>
> : > <DIV> </DIV>
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5375 Oakbrook=20
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Norcross, GA 30093 USA
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Fax:=20
> : > 678.684.2001
</FONT></DIV>
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> : > <DIV><FONT size=3D2>From: "venumadhav josyula" <</FONT><A=20
> : > href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
> : > size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
> : > size=3D2>></FONT></DIV>
> : > <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest Group"=20
> : > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:ss@lists.tapr.org""><FONT=20
> : > size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>></FONT></DIV>
> : > <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
> : > <DIV><FONT size=3D2>Subject: [ss] Re: Right Direction</FONT></DIV></DIV>
> : > <DIV>
</DIV>
> : > <DIV><FONT size=3D2>: hey paul,
: <BR>: I am student doing my masters
> =
> : > in ee, my=20
> : > area of specilization is ss and <BR>: datacommunications.
: <BR>:=20
> : > 1   you say all the intermod that is generated in this band is
> =
> : >
> : > unreal
: why is this?</FONT></DIV>
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> : > 4th. order=20
> : > harmonics from paging systems, two-way radio systems, TV stations, =
> : > microwave=20
> : > ovens, etc. We have taken (usually in larger metro areas, a =
> : > spectrum=20
> : > analyzer and taken a look at 900 MHz ISM band... and the display =
> : > looks like=20
> : > a "Prarie Grass field in a 50 mile per hour wind and majority of the =
> : > 'jamming'=20
> : > signals are very high in amplitude. No way can critical data =
> : > applications=20
> : > tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
> : > monitoring?=20
> : > Factory Automation control?</EM></STRONG></FONT></DIV>
> : > <DIV><FONT size=3D2>
: 2 secondly what is reason of using=20
> : > 2.4ghz.</FONT></DIV>
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> : > original message:=20
> : > "QRM, QRN, and all the intermod generated that falls into this band
> =
> : > is=20
> : > unreal! Main reason we discontinued all products in 900 MHz ISM band and
> =
> : > went=20
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> : > acceptance of product line now we have moved to 2.4 GHz)... 900 MHz can
> =
> : > ONLY be=20
> : > sold in USA, Canada and Mexico =
> : > (legally)."
</EM></STRONG></FONT></DIV>
> : > <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
> : > internet and data=20
> : > services ?</FONT></DIV>
> : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is =
> : > commercial and=20
> : > industrial and we took this proven and accepted OEM SS Transceiver
> =
> : > Module=20
> : > and developed a line of ISP and Ethernet =
> : > products.</EM></STRONG></FONT></DIV>
> : > <DIV> </DIV>
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> : > things at home=20
> : > with some of our products... in the event my home ISP is monitoring this
> =
> : > server.=20
> : > just expermenting when I tell this... "I have ADSL @ home & sending
> =
> : > a full=20
> : > connection to/from daugher & son-in-law a mile away! By =
> : > bridging=20
> : > my LAN at home with their LAN at their home!" Using a router so the ISP
> =
> : > only=20
> : > sees one IP! (Also provides the firewall I need for=20
> : > security.)</EM></STRONG></FONT></DIV>
> : > <DIV> </DIV>
> : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group does =
> : > not object=20
> : > to any response such as this because I do not want to convert a =
> : > 'ham radio=20
> : > oriented' list server into a commercial venture... however, I have a =
> : > ball=20
> : > dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
> : > <DIV><FONT size=3D2>
: <BR>: thanking you
: yours sincerely
: =
> : >
: <BR>:=20
> : >
: >From: "Paul McInnish" <</FONT><A=20
> : > href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
> : > size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
> : > >Reply-To:=20
> : > "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
> : > href=3D"mailto:ss@lists.tapr.org"><FONT =
> : > size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
> : > size=3D2>>
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> =
> : >
> : > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:ss@lists.tapr.org""><FONT=20
> : > size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
> : > >Subject: [ss] Re:=20
> : > Right Direction
: >Date: Thu, 13 Jul 2000 16:22:39 -0400
:=20
> : > >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
> : > hotmail.com=20
> : > (3.2) with ESMTP id <BR>: >MHotMailBB3770DC00C3D820F3B6CC11D91808F50;
> =
> : > Thu Jul=20
> : > 13 13:26:12 2000
: >From </FONT><A=20
> : > href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
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> : > Jul 13=20
> : > 13:28:28 2000
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> : > href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
> : > size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
> : > >Message-ID:=20
> : >
: ><</FONT><A=20
> : >
> href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
> : > m@lists.tapr.org"><FONT=20
> : >
> size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
> : > s.tapr.org</FONT></A><FONT=20
> : > size=3D2>>
: >References: <BR>: ><</FONT><A=20
> : >
> href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=

> : > .com@lists.tapr.org"><FONT=20
> : >
> size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
> : > ists.tapr.org</FONT></A><FONT=20
> : > size=3D2>>
: >Organization: Digital Wireless
> Corporation
:=20
> : > >X-Priority: 3
: >X-MSMail-Priority: Normal
: >X-MimeOLE:
> =
> : >
> : > Produced By Microsoft MimeOLE V5.50.4133.2400
: =
> : > >X-MDaemon-Deliver-To:=20
> : > </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&
quot;mailto:ss@lists.tapr.org""><FONT=20
> : > size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> : > >X-Return-Path:=20
> : > </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&
quot;mailto:pmcinnish@digiwrls.com""><FONT=20
> : > size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
> : > >List-Unsubscribe:=20
> : > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:leave-ss-6751T@lists.tapr.org""><FONT=20
> : > size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
> : > size=3D2>>
:=20
> : > >List-Software: Lyris Server version 3.0
: >List-Subscribe:=20
> : > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive
/3D"mailto:subscribe-ss@lists.tapr.org""><FONT=20
> : > size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
> : > size=3D2>>
:=20
> : > >List-Owner: <</FONT><A =
> : > href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
> : > size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
> : > size=3D2>>
:=20
> : > >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20
> : > href=3D"http://www.tapr.org"><FONT =
> : > size=3D2>http://www.tapr.org</FONT></A><FONT=20
> : > size=3D2>>
: >X-Message-Id:=20
> : > <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender: =
> : > </FONT><A=20
> : > href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
> : > size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT
> size=3D2>:=20
> : > >Precedence: bulk
: >
: >Yep... NOT SS and range is =
> : > limited to=20
> : > just a few feet!
: >
: >Also, their choice of the 900 MHz =
> : > ISM band=20
> : > is a horrible mistake... QRM,
: >QRN, and all the intermod =
> : > generated that=20
> : > falls into this band is unreal!
: >Main reason we discontinued all
> =
> : >
> : > products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz ISM
> =
> : > band...=20
> : > also allows us to ship world wide (very high acceptance of
: =
> : > >product line=20
> : > now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
> : > >USA,=20
> : > Canada and Mexico (legally).
: >
: >73,
: >
: =
> : > >Paul=20
> : > McInnish - K4BET
: >Manager, Business Development
: >Digital
> =
> : >
> : > Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
> : > USA
:=20
> : > >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
> : > >Cellular=20
> : > Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
> : > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
> : > ></FONT><A=20
> : > href=3D"http://www.digital-wireless.com"><FONT=20
> : > size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT size=3D2>:
> =
> : > >SSuRFnet=20
> : > E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arc
hive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
> : > size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>: ></FONT><A
> =
> : >

> : > href=3D"http://www.ssurfnet.com"><FONT=20
> : > size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
> : > >
: >Visit=20
> : > with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24 August, =
> : > 2000
:=20
> : > >New Orleans, LA USA
: ></FONT><A=20
> : > href=3D"http://www.isa.org/events/"><FONT=20
> : > size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
> : > >
:=20
> : > >----- Original Message -----
: >From: "William C. Hast" =
> : > <</FONT><A=20
> : > href=3D"mailto:wchast@utilpart.com"><FONT=20
> : > size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
: >To:
> =
> : > "TAPR Spread=20
> : > Spectrum Special Interest Group" <</FONT><A=20
> : > href=3D"mailto:ss@lists.tapr.org"><FONT =
> : > size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
> : > size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
> : > >Subject:=20
> : > [ss] Right Direction
: >
: >
: >: Folks:
: >: =
> : > These guys=20
> : > are going the right direction, the just
: >: need to put in a real
> =
> : > SS RF=20
> : > deck.
: >:
: >: Go take a look at it and see what you =
> : > think.
:=20
> : > >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig
/mail_archive/3D"http://www.cybiko.com/""><FONT=20
> : > size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
> : > >:
: >: I=20
> : > think that they have the right concept. They
: >: just need to do
> =
> : > a bit of=20
> : > work on it.
: >:
: >: ---
: >: You are currently =
> : > subscribed to=20
> : > ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arch
ive/3D"mailto:k4bet@digital-wireless.com""><FONT=20
> : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: >:
> =
> : > To=20
> : > unsubscribe send a blank email to </FONT><A=20
> : > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> : > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> : > >:
:=20
> : > >:
: >
: >
: >
: >---
: >You are =
> : > currently=20
> : > subscribed to ss as: </FONT><A =
> : > href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
> : > size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>: >To =
> : > unsubscribe=20
> : > send a blank email to </FONT><A=20
> : > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> : > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> : > >
:=20
> : >
:=20
> : >
> _____<=
> : > BR>:=20
> : > Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
> : > href=3D"http://www.hotmail.com"><FONT=20
> : > size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>: =
> : >
: ---
:=20
> : > You are currently subscribed to ss as: </FONT><A=20
> : > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
> : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: To =
> : > unsubscribe=20
> : > send a blank email to </FONT><A=20
> : > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
> : > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
> : >
:=20
> : > </FONT></DIV></BODY></HTML>
> : >
> : > ------=_NextPart_000_04CC_01BFED85.B40939C0--
> : >
> : >
> : >
> : >
> : >

> : > ---
> : >
> : > END OF DIGEST
> : >
> : > ---
> : > You are currently subscribed to ss as: ussailis@shaysnet.com
> : > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> : >
> : >
> :
> : ---
> : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> :
> :
>
>
>
> --
>
> Subject: Spread Spectrum
> From: GKadir@aol.com
> Date: Mon, 17 Jul 2000 13:20:26 EDT
> X-Message-Number: 3
>
> Hi All
>
>
> I don't if you can help me on an issue I am currently working on. I am
> trying to use One VSAT antenna for 3 remote site in Bangladesh. Each site has
> 10 lines, and want to connect them so that they all link up with the main
> site and use the one antenna. I also need to know can we use one multiplexer
> at the main site and interconnect via spread spectrum or do we need 3
> multipledxers each at one site. We are trying to connect our UK offices to
> Bangladesh and want to know the best and cost effective way to do it. We
> certainly don't want to put up 3 VSAT antenna each at one site, which
> certainly will drive up our cost.
>
>
>
> Thanking you in advance for your recommendations.
>
> Kadir
>
> --
>
> Subject: Re: Spread Spectrum
> From: Derek Lassen <kn6td@clubnet.net>
> Date: Mon, 17 Jul 2000 13:10:18 -0700
> X-Message-Number: 4
>
> You left out three critical pieces of information:
> How far are the remote sites from the central site?
> Can the remote sites see the central site by radio line of sight?
> How much thruput do you need (minimum and maximum).
>
> A first cut WAG would be get 4 towers, 6 old WaveLAN 915 MHz cards (higher
> power and cheap), 6 ten element 915MHz Yagi antennas, and 6 runs of Coax.
>
> HTH.
>
> (s) Derek
>
>
> At 01:20 PM 7/17/00 -0400, GKadir@aol.com wrote:
> >Hi All
> >
> >
> >I don't if you can help me on an issue I am currently working on. I am
> >trying to use One VSAT antenna for 3 remote site in Bangladesh. Each site has
> >10 lines, and want to connect them so that they all link up with the main
> >site and use the one antenna. I also need to know can we use one multiplexer
> >at the main site and interconnect via spread spectrum or do we need 3
> >multipledxers each at one site. We are trying to connect our UK offices to
> >Bangladesh and want to know the best and cost effective way to do it. We
> >certainly don't want to put up 3 VSAT antenna each at one site, which
> >certainly will drive up our cost.
> >
> >

> >
> >Thanking you in advance for your recommendations.
> >
> >Kadir
> >
> >---
> >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

40. [ss] ARRL and TAPR 19th Annual Digital Communications Conference

From: "Steven R. Bible" <steveb@dandin.com>
Date: Wed, 19 Jul 2000 23:30:13 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-97514-2000.07.19-22.35.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information
Mark your calendar and start making plans to attend the year's premier event in digital communications. The 19th Annual ARRL and TAPR Digital Communications Conference will be held September 22-24, 2000, in Orlando, Florida - just minutes from the Orlando International Airport.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the

Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be Lake Monroe Amateur Radio Society (http://www.qsl.net/lmars/),Orange County ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773), and Orlando Amateur Radio Club(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Call for Papers
Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by August 7th, 2000, and should be submitted to

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to

   lweinberg@arrl.org

Information on paper submission guidelines are available on-line at

   http://www.tapr.org/dcc

Hotel
Conference presentations, meetings, and seminars will be held at the Orlando Airport Marriott. It is highly recommended that you book your room prior to arriving. A special DCC room rate of $89/single and $89/double per night has been blocked for 50 rooms and is available until September 1st, 2000. Once the 50 rooms have been reserved, room rates will increase. So be sure to book your rooms early! The hotel provides transportation to and from the Orlando International Airport. Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.

- TAPR Membership Meeting
- An event at which the most important new developments in amateur
  digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

There are few activities where your participation can be so much fun
and important! What a great way to share and renew your enthusiasm for
digital amateur radio! A get-together with colleagues and bringing
each other up to date on your latest work -- all this, and more, for
an unforgettable weekend of amateur radio and digital communications.
We hope to see you at the ARRL and TAPR Digital Communications
Conference on September 22-24, 2000!

Full information on the conference and hotel information can be
obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
Internet: http://www.tapr.org and tapr@tapr.org to register or for
additional information.

Conference Registration includes: Conference Proceedings, Sessions,
Meetings, and Lunch on Saturday.

See http://www.tapr.org/dcc for an on-line registration form or
text form for mailing or faxing.

A registration packet will be mailed in September upon receipt of
registration form and payment.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

41. [ss] Re: ss digest: July 17, 2000

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 24 Jul 2000 09:19:35 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-98196-2000.07.24-08.28.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As stated in the last paragraph of my message... "even @ 2.4GHZ it is there
but we control that with
DSP, hard filtering, soft filtering, very sharp band skirts, etc."
Additionally there are some things we do (thus the etc.) that are very
proprietary and not at liberty to discuss... but it works!

73,

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
One Meca Way
Norcross, GA 30093, USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular Phone: 678.429.2124
OEM E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com
SSuRFnet E-mail: k4bet@ssurfnet.com
http://www.ssurfnet.com

Visit with us at ISA Expo 2000!
Booth 1843
21 - 24 August, 2000
New Orleans, LA USA
http://www.isa.org/events/
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and much nicer);
Effective 14 August 2000:
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Digital Wireless Corporation
5375 Oakbrook Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax: 678.684.2001

----- Original Message -----
From: "Jim Ussailis" <ussailis@equinox.shaysnet.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "ss digest recipients" <ss@lists.tapr.org>
Sent: Wednesday, July 19, 2000 12:16 PM
Subject: [ss] Re: ss digest: July 17, 2000

: How do you deal with microwave oven interference at 2.45 GHz?
:
: Jim Ussailis, W1EQO
:
: On Tue, 18 Jul 2000, TAPR Spread Spectrum Special Interest Group digest
wrote:
:
: > TAPR Spread Spectrum Special Interest Group Digest for Monday, July 17,
2000.
: >
: > 1. Re: ss digest: July 14, 2000
: > 2. Re: ss digest: July 14, 2000
: > 3. Spread Spectrum
: > 4. Re: Spread Spectrum
: >
: > --
: >
: > Subject: Re: ss digest: July 14, 2000
: > From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > Date: Mon, 17 Jul 2000 09:16:34 -0400
: > X-Message-Number: 1
: >
: > Nope... not true in the DIGITAL spread spectrum world! A small amount
of
: > crud can cause havoc! Assume one is using a frequency hopping digital
spread
: > spectrum transceiver sending/receiving life support monitoring data...
the
: > throughput can be severely slowed down as the transceiver makes every
effort
: > to receive all the data and with all the error checking the transceiver
is
: > having to do... well, I sure would not want that!
: >
: > Or you are controlling several dozen fully automated robotic production
: > lines... some dropped data, some erred data... some flawed data... the
: > robotics either shuts down, goes havoc, etc., etc.....
: >
: > Critical digital data cannot tolerate trash! Even small amounts! And
some
: > speed requirements are also critical! Noise, interference & jamming
slows
: > the digital system down, dramatically. As I previously stated... the
reasons
: > we chose to get out of the 900 MHz ISM band is precisely because of all
the
: > noise & interference... even @ 2.4GHZ it is there but we control that
with
: > DSP, hard filtering, soft filtering, very sharp band skirts, etc. AND we
can
: > ship product all over the world! 900 MHz is restricted only to USA,
Canada
: > & Mexico!
: >
: > And ad-in-finitium!
: >
: > Paul McInnish - K4BET
: > Manager, Business Development
: > Digital Wireless Corp.
: > One Meca Way
: > Norcross, GA 30093, USA
: > Pho: 770.564.5540, Ext. 2342
: > Fax: 770.564.5541
: > Cellular Phone: 678.429.2124
: > OEM E-mail: k4bet@digital-wireless.com

: > http://www.digital-wireless.com
: > SSuRFnet E-mail: k4bet@ssurfnet.com
: > http://www.ssurfnet.com
: >
: > Visit with us at ISA Expo 2000!
: > Booth 1843
: > 21 - 24 August, 2000
: > New Orleans, LA USA
: > http://www.isa.org/events/
: > ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
: > New address (bigger and much nicer);
: > Effective 14 August 2000:
: >
: > Digital Wireless Corporation
: > 5375 Oakbrook Parkway
: > Norcross, GA 30093 USA
: > Pho: 678.684.2000
: > Fax: 678.684.2001
: >
: > ----- Original Message -----
: > From: "Chuck Hast" <kp4djt@tampabay.rr.com>
: > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > Sent: Sunday, July 16, 2000 2:31 AM
: > Subject: [ss] Re: ss digest: July 14, 2000
: >
: >
: > : I live in Tampa, and have looked at the 900 Mhz band, there is
: > : some trash, but it is not that bad. I have some 900 MHz data links
: > : on there, these are old discrete channel devices, seem to work
: > : no problem too. Guess depending on your area your milage
: > : may vary.
: > :
: > :
: > : On Sat, 15 Jul 2000 20:43:36 -0400 (EDT), Jim Ussailis wrote:
: > :
: > : >Something I don't understand regarding intermod in the 900 MHz ISM
: > band...
: > : >
: > : >Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and
up.
: > : >I don't doubt about the harmonics from TV stations in metro areas,
but...
: > : >
: > : >I listed to the 900 MHz band almost daily, and hear nothing, or see
: > : >nothing on the analyser. Of course I am in a rural area.
: > : >
: > : >We do have several pagers around 931. The rest of it is very quiet.
: > : >
: > : >
: > : >Jim Ussailis, W1EQO
: > : >
: > : >National Wireless, Inc
: > : >
: > : >
: > : >On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group
digest
: > wrote:
: > : >
: > : >> TAPR Spread Spectrum Special Interest Group Digest for Friday, July
14,
: > 2000.
: > : >>
: > : >> 1. Re: Right Direction
: > : >> 2. Re: Right Direction
: > : >> 3. Re: Right Direction
: > : >> 4. Re: Right Direction
: > : >> 5. Re: Right Direction
: > : >>
: > :
>> --
: > : >>
: > : >> Subject: Re: Right Direction
: > : >> From: Derek Lassen <kn6td@clubnet.net>
: > : >> Date: Fri, 14 Jul 2000 01:51:40 -0700
: > : >> X-Message-Number: 1
: > : >>
: > : >> Anybody get one yet?
: > : >> What's the processor?
: > : >>

: > : >> I wonder if there is a market for a game server / range extender
(small
: > : >> enough to stay in the backpack).
: > : >>
: > : >> :>
: > : >>
: > : >> (s) Derek
: > : >>
: > : >> At 10:03 PM 7/13/00 -0600, you wrote:
: > : >> >I hate to rain on your parade, but going in the right direction
for
: > : >> >what? Wireless chat at 150'? If the person's that close I'll get
up
: > and
: > : >> >talk to them eye to eye. Organizer? Maybe... but it's bigger than
a
: > : >> >Palm. Internet? screen's kind of small ain't it? Games? I wish I
had
: > the
: > : >> >time. Friend finder? Maybe it'll come in handy at the next Rolling
: > : >> >Stones Concert. This is a toy if I've ever seen one. Maybe
something
: > fun
: > : >> >for the kids. I can't imagine what I'd use it for. Someone
obviously
: > : >> >disagrees with me and has put beaucoup bucks into it to be able to
: > sell
: > : >> >the thing for $129. Maybe I'll get one for my kid for xmas.
: > : >> >
: > : >> >bah humbug
: > : >> >
: > : >> >--Dave
: > : >> >
: > : >> >"William C. Hast" wrote:
: > : >> >
: > : >> > > Folks:
: > : >> > > These guys are going the right direction, the just
: > : >> > > need to put in a real SS RF deck.
: > : >> > >
: > : >> > > Go take a look at it and see what you think.
: > : >> > >
: > : >> > > http://www.cybiko.com/
: > : >> > >
: > : >> > > I think that they have the right concept. They
: > : >> > > just need to do a bit of work on it.
: > : >> > >
: > : >> > > ---
: > : >> > > You are currently subscribed to ss as: depagnier@uswest.net
: > : >> > > To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >> >
: > : >> >
: > : >> >---
: > : >> >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
: > : >> >To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >>
: > : >>
: > : >>
: > :
>> --
: > : >>
: > : >> Subject: Re: Right Direction
: > : >> From: Derek Lassen <kn6td@clubnet.net>
: > : >> Date: Fri, 14 Jul 2000 01:59:33 -0700
: > : >> X-Message-Number: 2
: > : >>
: > : >> I just looked at the web site - I shoulda RTFM. Sorry.
: > : >>
: > : >> Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash.
It
: > : >> seems to have a compact flash.
: > : >>
: > : >> RF communications is via 19k on 915 MHz GMSK.
: > : >>
: > : >> 73 de KN6TD
: > : >>
: > : >> (s) Derek
: > : >>

: > : >> At 01:51 AM 7/14/00 -0700, you wrote:
: > : >> >Anybody get one yet?
: > : >> >What's the processor?
: > : >> >
: > : >> >I wonder if there is a market for a game server / range extender
: > (small
: > : >> >enough to stay in the backpack).
: > : >> >
: > : >> >:>
: > : >> >
: > : >> >(s) Derek
: > : >> >
: > : >> >At 10:03 PM 7/13/00 -0600, you wrote:
: > : >> >>I hate to rain on your parade, but going in the right direction
for
: > : >> >>what? Wireless chat at 150'? If the person's that close I'll get
up
: > and
: > : >> >>talk to them eye to eye. Organizer? Maybe... but it's bigger than
a
: > : >> >>Palm. Internet? screen's kind of small ain't it? Games? I wish I
had
: > the
: > : >> >>time. Friend finder? Maybe it'll come in handy at the next
Rolling
: > : >> >>Stones Concert. This is a toy if I've ever seen one. Maybe
something
: > fun
: > : >> >>for the kids. I can't imagine what I'd use it for. Someone
obviously
: > : >> >>disagrees with me and has put beaucoup bucks into it to be able
to
: > sell
: > : >> >>the thing for $129. Maybe I'll get one for my kid for xmas.
: > : >> >>
: > : >> >>bah humbug
: > : >> >>
: > : >> >>--Dave
: > : >> >>
: > : >> >>"William C. Hast" wrote:
: > : >> >>
: > : >> >> > Folks:
: > : >> >> > These guys are going the right direction, the just
: > : >> >> > need to put in a real SS RF deck.
: > : >> >> >
: > : >> >> > Go take a look at it and see what you think.
: > : >> >> >
: > : >> >> > http://www.cybiko.com/
: > : >> >> >
: > : >> >> > I think that they have the right concept. They
: > : >> >> > just need to do a bit of work on it.
: > : >> >> >
: > : >> >> > ---
: > : >> >> > You are currently subscribed to ss as: depagnier@uswest.net
: > : >> >> > To unsubscribe send a blank email to
: > leave-ss-6751T@lists.tapr.org
: > : >>
: > : >>
: > : >>
: > :
>> --
: > : >>
: > : >> Subject: Re: Right Direction
: > : >> From: "venumadhav josyula" <venumadhavj@hotmail.com>
: > : >> Date: Fri, 14 Jul 2000 04:33:31 PDT
: > : >> X-Message-Number: 3
: > : >>
: > : >> hey paul,
: > : >>
: > : >> I am student doing my masters in ee, my area of specilization is ss
and
: > : >> datacommunications.
: > : >>
: > : >> 1   you say all the intermod that is generated in this band is
unreal
: > : >> why is this?
: > : >> 2 secondly what is reason of using 2.4ghz.
: > : >> 3 Are you talking about wireless internet and data services ?
: > : >>

: > : >> thanking you
: > : >> yours sincerely
: > : >>
: > : >>
: > : >>
: > : >> >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : >> >Reply-To: "TAPR Spread Spectrum Special Interest Group"
: > <ss@lists.tapr.org>
: > : >> >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : >> >Subject: [ss] Re: Right Direction
: > : >> >Date: Thu, 13 Jul 2000 16:22:39 -0400
: > : >> >MIME-Version: 1.0
: > : >> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
: > : >> >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12
2000
: > : >> >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: > : >> >Return-Path: <PMcinnish@digiwrls.com>
: > : >> >Message-ID:
: > : >>
: >
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org
: > >
: > : >> >References:
: > : >>
: >
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.
: > org>
: > : >> >Organization: Digital Wireless Corporation
: > : >> >X-Priority: 3
: > : >> >X-MSMail-Priority: Normal
: > : >> >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: > : >> >X-MDaemon-Deliver-To: ss@lists.tapr.org
: > : >> >X-Return-Path: pmcinnish@digiwrls.com
: > : >> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: > : >> >List-Software: Lyris Server version 3.0
: > : >> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: > : >> >List-Owner: <mailto:owner-ss@lists.tapr.org>
: > : >> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: > : >> >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: > : >> >Sender: bounce-ss-17222@lists.tapr.org
: > : >> >Precedence: bulk
: > : >> >
: > : >> >Yep... NOT SS and range is limited to just a few feet!
: > : >> >
: > : >> >Also, their choice of the 900 MHz ISM band is a horrible
mistake...
: > QRM,
: > : >> >QRN, and all the intermod generated that falls into this band is
: > unreal!
: > : >> >Main reason we discontinued all products in 900 MHz ISM band and
went
: > to
: > : >> >2.4
: > : >> >GHz ISM band... also allows us to ship world wide (very high
: > acceptance of
: > : >> >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be
sold
: > in
: > : >> >USA, Canada and Mexico (legally).
: > : >> >
: > : >> >73,
: > : >> >
: > : >> >Paul McInnish - K4BET
: > : >> >Manager, Business Development
: > : >> >Digital Wireless Corp.
: > : >> >One Meca Way
: > : >> >Norcross, GA 30093, USA
: > : >> >Pho: 770.564.5540, Ext. 2342
: > : >> >Fax: 770.564.5541
: > : >> >Cellular Phone: 678.429.2124
: > : >> >OEM E-mail: k4bet@digital-wireless.com
: > : >> >http://www.digital-wireless.com
: > : >> >SSuRFnet E-mail: k4bet@ssurfnet.com
: > : >> >http://www.ssurfnet.com
: > : >> >
: > : >> >Visit with us at ISA Expo 2000!
: > : >> >Booth 1843
: > : >> >21 - 24 August, 2000

: > : >> >New Orleans, LA USA
: > : >> >http://www.isa.org/events/
: > : >> >
: > : >> >----- Original Message -----
: > : >> >From: "William C. Hast" <wchast@utilpart.com>
: > : >> >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : >> >Sent: Thursday, July 13, 2000 2:46 PM
: > : >> >Subject: [ss] Right Direction
: > : >> >
: > : >> >
: > : >> >: Folks:
: > : >> >: These guys are going the right direction, the just
: > : >> >: need to put in a real SS RF deck.
: > : >> >:
: > : >> >: Go take a look at it and see what you think.
: > : >> >:
: > : >> >: http://www.cybiko.com/
: > : >> >:
: > : >> >: I think that they have the right concept. They
: > : >> >: just need to do a bit of work on it.
: > : >> >:
: > : >> >: ---
: > : >> >: You are currently subscribed to ss as:
k4bet@digital-wireless.com
: > : >> >: To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >> >:
: > : >> >:
: > : >> >
: > : >> >
: > : >> >
: > : >> >---
: > : >> >You are currently subscribed to ss as: venumadhavj@hotmail.com
: > : >> >To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >> >
: > : >>
: > : >>
: > ____
: > : >> Get Your Private, Free E-mail from MSN Hotmail at
: > http://www.hotmail.com
: > : >>
: > : >>
: > :
>> --
: > : >>
: > : >> Subject: Re: Right Direction
: > : >> From: "Hast, Chuck" <wchast@utilpart.com>
: > : >> Date: Fri, 14 Jul 2000 07:32:35 -0400
: > : >> X-Message-Number: 4
: > : >>
: > : >> I called them and talked to them. They appear VERY open to
: > : >> ideas and recommendations. Indeed the RF deck is a deck
: > : >> out of a 900 MHz discrete channel phone (as told to me by
: > : >> them) there are 30 selectable channels and according to the
: > : >> propaganda each channel can support up to 100 interconnected
: > : >> users.
: > : >>
: > : >> For those who do not think much of it, I guess it ain't much but
: > : >> like my grandmomma said one day, "wish in one hand and spit
: > : >> in the other and see which fills the fastest", some times I think
: > : >> we do a lot of wishing and not enough spittin', so here we
: > : >> stand empty handed, and some company out there is bringing
: > : >> out the beginnings of the box we have been wishing for.
: > : >>
: > : >> In talking to them they sounded like the would like to develop
: > : >> a device and a network concept that would be like the ricochet
: > : >> system, or a cell like system, but they were VERY open to
: > : >> ideas and recommendations.
: > : >>
: > : >> They also want to do voice, but do not handle it yet. I believe
: > : >> the sound part is all there it is probably a software issue.
: > : >>
: > : >> I will repeat my self again, if we want to get some volume on
: > : >> these things we are going to have to get the volume radio users
: > : >> (voice users) involved, or I fear we will continue to spend a lot
: > : >> of time wishing. I totally favor a data world, but reality is that
: > : >> the world is a voice world, and the best way to get volume is

: > : >> to convert that voice into a data stream and then do neat magic
: > : >> with it that will make the voice users want to get on your system,
: > : >> pay the (insert monetary unit here) to do so and keep from draining
: > : >> YOUR pocket so much.
: > : >>
: > : >> Yes this box is crude and rude but, it is a start. I can probably
do
: > : >> better with a Casio Cassiopeia (sp?) with a PC card slot full of
radio,
: > : >> some software in there to handle the voice part and a access point
: > : >> well place on top of my building to use it a few hundred yards from
: > : >> the building, but the cost is now up there at over 1K USD.
: > : >>
: > : >> If they can keep the cost on this down near where it is now, and
: > : >> still field a SS device that can work through a hub or SS repeater,
: > : >> and carry a bit of power behind it (up to the 1 watt part 15 max)
: > : >> then they are really going the right direction for the volume user.
: > : >>
: > : >> Go out and look at the web site, give them a call, or a e-mail and
: > : >> see what you make of it.
: > : >>
: > : >>
: > : >>
: > : >>
: > :
>> --
: > : >>
: > : >> Subject: Re: Right Direction
: > : >> From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : >> Date: Fri, 14 Jul 2000 11:21:49 -0400
: > : >> X-Message-Number: 5
: > : >>
: > : >> This is a multi-part message in MIME format.
: > : >>
: > : >> ------=_NextPart_000_04CC_01BFED85.B40939C0
: > : >> Content-Type: text/plain;
: > : >> charset="Windows-1252"
: > : >> Content-Transfer-Encoding: quoted-printable
: > : >>
: > : >> See response embedded below:
: > : >>
: > : >> Paul McInnish - K4BET
: > : >> Manager, Business Development
: > : >> Digital Wireless Corp.
: > : >> One Meca Way
: > : >> Norcross, GA 30093, USA
: > : >> Pho: 770.564.5540, Ext. 2342
: > : >> Fax: 770.564.5541
: > : >> Cellular Phone: 678.429.2124
: > : >> OEM E-mail: k4bet@digital-wireless.com
: > : >> http://www.digital-wireless.com
: > : >> SSuRFnet E-mail: k4bet@ssurfnet.com
: > : >> http://www.ssurfnet.com
: > : >>
: > : >> Visit with us at ISA Expo 2000!
: > : >> Booth 1843
: > : >> 21 - 24 August, 2000
: > : >> New Orleans, LA USA
: > : >> http://www.isa.org/events/
: > : >> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
: > : >> New address (bigger and much nicer);
: > : >> Effective 14 August 2000:
: > : >>
: > : >> Digital Wireless Corporation
: > : >> 5375 Oakbrook Parkway
: > : >> Norcross, GA 30093 USA
: > : >> Pho: 678.684.2000
: > : >> Fax: 678.684.2001
: > : >>
: > : >> ----- Original Message -----=20
: > : >> From: "venumadhav josyula" <venumadhavj@hotmail.com>
: > : >> To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : >> Sent: Friday, July 14, 2000 7:33 AM
: > : >> Subject: [ss] Re: Right Direction
: > : >>
: > : >>
: > : >> : hey paul,
: > : >> :=20

: > : >> : I am student doing my masters in ee, my area of specilization is
ss =
: > : >> and=20
: > : >> : datacommunications.
: > : >> :=20
: > : >> : 1   you say all the intermod that is generated in this band is
unreal
: > =
: > : >>   =20
: > : >> : why is this?
: > : >> It is 2nd., 3rd. and 4th. order harmonics from paging systems,
two-way
: > =
: > : >> radio systems, TV stations, microwave ovens, etc. We have taken =
: > : >> (usually in larger metro areas, a spectrum analyzer and taken a
look at
: > =
: > : >> 900 MHz ISM band... and the display looks like a "Prarie Grass
field in
: > =
: > : >> a 50 mile per hour wind and majority of the 'jamming' signals are
very
: > =
: > : >> high in amplitude. No way can critical data applications tolerate
: > this. =
: > : >> Life Support? Critical Monitoring? Nuclear Plant monitoring?
Factory =
: > : >> Automation control?
: > : >>
: > : >> : 2 secondly what is reason of using 2.4ghz.
: > : >> As I stated in my original message: "QRM, QRN, and all the intermod
=
: > : >> generated that falls into this band is unreal! Main reason we =
: > : >> discontinued all products in 900 MHz ISM band and went to 2.4GHz
ISM =
: > : >> band... also allows us to ship world wide (very high acceptance of
=
: > : >> product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be
sold
: > =
: > : >> in USA, Canada and Mexico (legally)."
: > : >>
: > : >>
: > : >> : 3 Are you talking about wireless internet and data services ?
: > : >> Our core business is commercial and industrial and we took this
proven
: > =
: > : >> and accepted OEM SS Transceiver Module and developed a line of ISP
and
: > =
: > : >> Ethernet products.
: > : >>
: > : >> I am doing some neat things at home with some of our products... in
the
: > =
: > : >> event my home ISP is monitoring this server. just expermenting when
I =
: > : >> tell this... "I have ADSL @ home & sending a full connection
to/from =
: > : >> daugher & son-in-law a mile away! By bridging my LAN at home with
: > their =
: > : >> LAN at their home!" Using a router so the ISP only sees one IP!
(Also =
: > : >> provides the firewall I need for security.)
: > : >>
: > : >> I hope the group does not object to any response such as this
because I
: > =
: > : >> do not want to convert a 'ham radio oriented' list server into a =
: > : >> commercial venture... however, I have a ball dealing in the SS
world.
: > =
: > : >> Its fun!
: > : >>
: > : >> :=20
: > : >> : thanking you
: > : >> : yours sincerely
: > : >> :=20
: > : >> :=20

: > : >> :=20
: > : >> : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : >> : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
: > : >> <ss@lists.tapr.org>
: > : >> : >To: "TAPR Spread Spectrum Special Interest Group"
: > <ss@lists.tapr.org>
: > : >> : >Subject: [ss] Re: Right Direction
: > : >> : >Date: Thu, 13 Jul 2000 16:22:39 -0400
: > : >> : >MIME-Version: 1.0
: > : >> : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP
id=20
: > : >> : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12
2000
: > : >> : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: > : >> : >Return-Path: <PMcinnish@digiwrls.com>
: > : >> : >Message-ID:=20
: > : >> : =
: > : >>
: >
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
: > : >> org>
: > : >> : >References:=20
: > : >> : =
: > : >>
: >
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
: > : >> pr.org>
: > : >> : >Organization: Digital Wireless Corporation
: > : >> : >X-Priority: 3
: > : >> : >X-MSMail-Priority: Normal
: > : >> : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: > : >> : >X-MDaemon-Deliver-To: ss@lists.tapr.org
: > : >> : >X-Return-Path: pmcinnish@digiwrls.com
: > : >> : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: > : >> : >List-Software: Lyris Server version 3.0
: > : >> : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: > : >> : >List-Owner: <mailto:owner-ss@lists.tapr.org>
: > : >> : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: > : >> : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: > : >> : >Sender: bounce-ss-17222@lists.tapr.org
: > : >> : >Precedence: bulk
: > : >> : >
: > : >> : >Yep... NOT SS and range is limited to just a few feet!
: > : >> : >
: > : >> : >Also, their choice of the 900 MHz ISM band is a horrible
mistake...
: > =
: > : >> QRM,
: > : >> : >QRN, and all the intermod generated that falls into this band is
=
: > : >> unreal!
: > : >> : >Main reason we discontinued all products in 900 MHz ISM band and
: > went =
: > : >> to=20
: > : >> : >2.4
: > : >> : >GHz ISM band... also allows us to ship world wide (very high =
: > : >> acceptance of
: > : >> : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY
be =
: > : >> sold in
: > : >> : >USA, Canada and Mexico (legally).
: > : >> : >
: > : >> : >73,
: > : >> : >
: > : >> : >Paul McInnish - K4BET
: > : >> : >Manager, Business Development
: > : >> : >Digital Wireless Corp.
: > : >> : >One Meca Way
: > : >> : >Norcross, GA 30093, USA
: > : >> : >Pho: 770.564.5540, Ext. 2342
: > : >> : >Fax: 770.564.5541
: > : >> : >Cellular Phone: 678.429.2124
: > : >> : >OEM E-mail: k4bet@digital-wireless.com
: > : >> : >http://www.digital-wireless.com
: > : >> : >SSuRFnet E-mail: k4bet@ssurfnet.com
: > : >> : >http://www.ssurfnet.com
: > : >> : >
: > : >> : >Visit with us at ISA Expo 2000!
: > : >> : >Booth 1843

: > : >> : >21 - 24 August, 2000
: > : >> : >New Orleans, LA USA
: > : >> : >http://www.isa.org/events/
: > : >> : >
: > : >> : >----- Original Message -----
: > : >> : >From: "William C. Hast" <wchast@utilpart.com>
: > : >> : >To: "TAPR Spread Spectrum Special Interest Group"
: > <ss@lists.tapr.org>
: > : >> : >Sent: Thursday, July 13, 2000 2:46 PM
: > : >> : >Subject: [ss] Right Direction
: > : >> : >
: > : >> : >
: > : >> : >: Folks:
: > : >> : >: These guys are going the right direction, the just
: > : >> : >: need to put in a real SS RF deck.
: > : >> : >:
: > : >> : >: Go take a look at it and see what you think.
: > : >> : >:
: > : >> : >: http://www.cybiko.com/
: > : >> : >:
: > : >> : >: I think that they have the right concept. They
: > : >> : >: just need to do a bit of work on it.
: > : >> : >:
: > : >> : >: ---
: > : >> : >: You are currently subscribed to ss as:
k4bet@digital-wireless.com
: > : >> : >: To unsubscribe send a blank email to
: > leave-ss-6751T@lists.tapr.org
: > : >> : >:
: > : >> : >:
: > : >> : >
: > : >> : >
: > : >> : >
: > : >> : >---
: > : >> : >You are currently subscribed to ss as: venumadhavj@hotmail.com
: > : >> : >To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >> : >
: > : >> :=20
: > : >> : =
: > : >> :
: > _____
: > : >> : Get Your Private, Free E-mail from MSN Hotmail at =
: > : >> http://www.hotmail.com
: > : >> :=20
: > : >> :=20
: > : >> : ---
: > : >> : You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : >> : To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >> :=20
: > : >> :=20
: > : >> :
: > : >> ------=_NextPart_000_04CC_01BFED85.B40939C0
: > : >> Content-Type: text/html;
: > : >> charset="Windows-1252"
: > : >> Content-Transfer-Encoding: quoted-printable
: > : >> :
: > : >> <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
: > : >> <HTML><HEAD>
: > : >> <META content=3D"text/html; charset=3Dwindows-1252" =
: > : >> http-equiv=3DContent-Type>
: > : >> <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
: > : >> <STYLE></STYLE>
: > : >> </HEAD>
: > : >> <BODY>
: > : >> <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
: > : >> <DIV> </DIV>
: > : >> <DIV><FONT size=3D2>Paul McInnish - K4BET
Manager, Business=20
: > : >> Development
Digital Wireless Corp.
One Meca Way
Norcross,
GA =
: > : >> 30093,=20
: > : >> USA
Pho: 770.564.5540, Ext. 2342
Fax:
770.564.5541
Cellular =
: > : >> Phone:=20
: > : >> 678.429.2124
OEM E-mail: </FONT><A=20
: > : >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > : >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<A=20
: > : >> href=3D"http://www.digital-wireless.com"><FONT=20

: > : >> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT =
: > : >> size=3D2>SSuRFnet=20
: > : >> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_
archive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
: > : >> size=3D2>k4bet@ssurfnet.com</FONT></A>
<A =
: > : >> href=3D"http://www.ssurfnet.com"><FONT=20
: > : >> size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
: > : >> <DIV> </DIV>
: > : >> <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!
Booth
1843
21
: > =
: > : >> - 24=20
: > : >> August, 2000
New Orleans, LA USA
</FONT><A=20
: > : >> href=3D"http://www.isa.org/events/"><FONT=20
: > : >> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT=20
: > : >> size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and
: > much=20
: > : >> nicer);
Effective 14 August 2000:</FONT></DIV>
: > : >> <DIV> </DIV>
: > : >> <DIV><FONT size=3D2>Digital Wireless Corporation
5375
Oakbrook=20
: > : >> Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax:=20
: > : >> 678.684.2001
</FONT></DIV>
: > : >> <DIV><FONT size=3D2>----- Original Message ----- </FONT>
: > : >> <DIV><FONT size=3D2>From: "venumadhav josyula" <</FONT><A=20
: > : >> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: > : >> size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
: > : >> size=3D2>></FONT></DIV>
: > : >> <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest
: > Group"=20
: > : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arch
ive/3D"mailto:ss@lists.tapr.org""><FONT=20
: > : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT
size=3D2>></FONT></DIV>
: > : >> <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33
AM</FONT></DIV>
: > : >> <DIV><FONT size=3D2>Subject: [ss] Re: Right
: > Direction</FONT></DIV></DIV>
: > : >> <DIV>
</DIV>
: > : >> <DIV><FONT size=3D2>: hey paul,
: <BR>: I am student doing my
: > masters =
: > : >> in ee, my=20
: > : >> area of specilization is ss and <BR>: datacommunications.
:

:=20
: > : >> 1   you say all the intermod that is generated in this
band
: > is =
: > : >>
: > : >> unreal
: why is this?</FONT></DIV>
: > : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd.
and =
: > : >> 4th. order=20
: > : >> harmonics from paging systems, two-way radio systems, TV stations,
=
: > : >> microwave=20
: > : >> ovens, etc. We have taken (usually in larger metro areas, a =
: > : >> spectrum=20
: > : >> analyzer and taken a look at 900 MHz ISM band... and the
display =
: > : >> looks like=20
: > : >> a "Prarie Grass field in a 50 mile per hour wind and majority of
the =
: > : >> 'jamming'=20
: > : >> signals are very high in amplitude. No way can critical data
=
: > : >> applications=20
: > : >> tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
: > : >> monitoring?=20
: > : >> Factory Automation control?</EM></STRONG></FONT></DIV>
: > : >> <DIV><FONT size=3D2>
: 2 secondly what is reason of
using=20
: > : >> 2.4ghz.</FONT></DIV>
: > : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
: > : >> original message:=20
: > : >> "QRM, QRN, and all the intermod generated that falls into this
: > band =
: > : >> is=20
: > : >> unreal! Main reason we discontinued all products in 900 MHz ISM
band

: > and =
: > : >> went=20
: > : >> to 2.4GHz ISM band... also allows us to ship world wide (very
: > high=20
: > : >> acceptance of product line now we have moved to 2.4 GHz)... 900 MHz
can
: > =
: > : >> ONLY be=20
: > : >> sold in USA, Canada and Mexico =
: > : >> (legally)."
</EM></STRONG></FONT></DIV>
: > : >> <DIV><FONT size=3D2>
: 3 Are you talking about wireless =
: > : >> internet and data=20
: > : >> services ?</FONT></DIV>
: > : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business
is =
: > : >> commercial and=20
: > : >> industrial and we took this proven and accepted OEM SS
Transceiver
: > =
: > : >> Module=20
: > : >> and developed a line of ISP and Ethernet =
: > : >> products.</EM></STRONG></FONT></DIV>
: > : >> <DIV> </DIV>
: > : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some
neat =
: > : >> things at home=20
: > : >> with some of our products... in the event my home ISP is monitoring
: > this =
: > : >> server.=20
: > : >> just expermenting when I tell this... "I have ADSL @ home &
sending
: > =
: > : >> a full=20
: > : >> connection to/from daugher & son-in-law a mile away!
By
: > =
: > : >> bridging=20
: > : >> my LAN at home with their LAN at their home!" Using a router so the
ISP
: > =
: > : >> only=20
: > : >> sees one IP! (Also provides the firewall I need for=20
: > : >> security.)</EM></STRONG></FONT></DIV>
: > : >> <DIV> </DIV>
: > : >> <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group
does =
: > : >> not object=20
: > : >> to any response such as this because I do not want to convert
a =
: > : >> 'ham radio=20
: > : >> oriented' list server into a commercial venture... however, I have
a =
: > : >> ball=20
: > : >> dealing in the SS world. Its fun!</EM></STRONG></FONT></DIV>
: > : >> <DIV><FONT size=3D2>
: <BR>: thanking you
: yours
sincerely
:
: > =
: > : >>
: <BR>:=20
: > : >>
: >From: "Paul McInnish" <</FONT><A=20
: > : >> href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
: > : >> size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
:
=
: > : >> >Reply-To:=20
: > : >> "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
: > : >> href=3D"mailto:ss@lists.tapr.org"><FONT =
: > : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: > : >> size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest
: > Group" =
: > : >>
: > : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arch
ive/3D"mailto:ss@lists.tapr.org""><FONT=20
: > : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
: > : >> >Subject: [ss] Re:=20
: > : >> Right Direction
: >Date: Thu, 13 Jul 2000
16:22:39 -0400
:=20
: > : >> >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
: > : >> hotmail.com=20
: > : >> (3.2) with ESMTP id <BR>:
: > >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; =

: > : >> Thu Jul=20
: > : >> 13 13:26:12 2000
: >From </FONT><A=20
: > : >> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: > : >> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2>
Thu =
: > : >> Jul 13=20
: > : >> 13:28:28 2000
: >Return-Path: <</FONT><A=20
: > : >> href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
: > : >> size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
:
=
: > : >> >Message-ID:=20
: > : >>
: ><</FONT><A=20
: > : >>
: >
href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
: > : >> m@lists.tapr.org"><FONT=20
: > : >>
: >
size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
: > : >> s.tapr.org</FONT></A><FONT=20
: > : >> size=3D2>>
: >References: <BR>: ><</FONT><A=20
: > : >>
: >
href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
: > : >> .com@lists.tapr.org"><FONT=20
: > : >>
: >
size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
: > : >> ists.tapr.org</FONT></A><FONT=20
: > : >> size=3D2>>
: >Organization: Digital Wireless
: > Corporation
:=20
: > : >> >X-Priority: 3
: >X-MSMail-Priority: Normal
:
: > >X-MimeOLE: =
: > : >>
: > : >> Produced By Microsoft MimeOLE V5.50.4133.2400
: =
: > : >> >X-MDaemon-Deliver-To:=20
: > : >> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:ss@lists.tapr.org""><FONT=20
: > : >> size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
: > : >> >X-Return-Path:=20
: > : >> </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/
3D"mailto:pmcinnish@digiwrls.com""><FONT=20
: > : >> size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
: > : >> >List-Unsubscribe:=20
: > : >> <</FONT><A
href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D"mailto:leav
e-ss-6751T@lists.tapr.org""><FONT=20
: > : >> size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
: > : >> size=3D2>>
:=20
: > : >> >List-Software: Lyris Server version 3.0
:
>List-Subscribe:=20
: > : >> <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_arch
ive/3D"mailto:subscribe-ss@lists.tapr.org""><FONT=20
: > : >> size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
: > : >> size=3D2>>
:=20
: > : >> >List-Owner: <</FONT><A =
: > : >> href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
: > : >> size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
: > : >> size=3D2>>
:=20
: > : >> >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20
: > : >> href=3D"http://www.tapr.org"><FONT =
: > : >> size=3D2>http://www.tapr.org</FONT></A><FONT=20
: > : >> size=3D2>>
: >X-Message-Id:=20
: > : >> <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender:
=
: > : >> </FONT><A=20
: > : >> href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: > : >> size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT
: > size=3D2>:=20
: > : >> >Precedence: bulk
: >
: >Yep... NOT SS and range is
=
: > : >> limited to=20
: > : >> just a few feet!
: >
: >Also, their choice of the 900
MHz =
: > : >> ISM band=20
: > : >> is a horrible mistake... QRM,
: >QRN, and all the intermod =
: > : >> generated that=20
: > : >> falls into this band is unreal!
: >Main reason we
discontinued

: > all =
: > : >>
: > : >> products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz
ISM
: > =
: > : >> band...=20
: > : >> also allows us to ship world wide (very high acceptance of
: =
: > : >> >product line=20
: > : >> now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
: > : >> >USA,=20
: > : >> Canada and Mexico (legally).
: >
: >73,
: >
:
=
: > : >> >Paul=20
: > : >> McInnish - K4BET
: >Manager, Business Development
:
: > >Digital =
: > : >>
: > : >> Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
: > : >> USA
:=20
: > : >> >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
: > : >> >Cellular=20
: > : >> Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
: > : >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > : >> size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>:
=
: > : >> ></FONT><A=20
: > : >> href=3D"http://www.digital-wireless.com"><FONT=20
: > : >> size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT
size=3D2>:
: > =
: > : >> >SSuRFnet=20
: > : >> E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_
archive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
: > : >> size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>:
: > ></FONT><A =
: > : >>
: > : >> href=3D"http://www.ssurfnet.com"><FONT=20
: > : >> size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
: > : >> >
: >Visit=20
: > : >> with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24
August,
: > =
: > : >> 2000
:=20
: > : >> >New Orleans, LA USA
: ></FONT><A=20
: > : >> href=3D"http://www.isa.org/events/"><FONT=20
: > : >> size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>:
=
: > : >> >
:=20
: > : >> >----- Original Message -----
: >From: "William C. Hast" =
: > : >> <</FONT><A=20
: > : >> href=3D"mailto:wchast@utilpart.com"><FONT=20
: > : >> size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
:
>To:
: > =
: > : >> "TAPR Spread=20
: > : >> Spectrum Special Interest Group" <</FONT><A=20
: > : >> href=3D"mailto:ss@lists.tapr.org"><FONT =
: > : >> size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: > : >> size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
: > : >> >Subject:=20
: > : >> [ss] Right Direction
: >
: >
: >: Folks:
:
>: =
: > : >> These guys=20
: > : >> are going the right direction, the just
: >: need to put in a
: > real =
: > : >> SS RF=20
: > : >> deck.
: >:
: >: Go take a look at it and see what you =
: > : >> think.
:=20
: > : >> >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-
sig/mail_archive/3D"http://www.cybiko.com/""><FONT=20
: > : >> size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
: > : >> >:
: >: I=20
: > : >> think that they have the right concept. They
: >: just need
to do
: > =
: > : >> a bit of=20
: > : >> work on it.
: >:
: >: ---
: >: You are currently
=
: > : >> subscribed to=20
: > : >> ss as: </FONT><A

```
href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D&amp;quot;mailto:k4be
t@digital-wireless.com&amp;quot;"><FONT=20
: > : >> size=3D2>k4bet@digital-wireless.com</FONT></A><BR><FONT size=3D2>:
: > &gt;: =
: > : >> To=20
: > : >> unsubscribe send a blank email to </FONT><A=20
: > : >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > : >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A><BR><FONT
size=3D2>:
: > =
: > : >> &gt;:<BR>:=20
: > : >> &gt;:<BR>: &gt;<BR>: &gt;<BR>: &gt;---<BR>: &gt;You are =
: > : >> currently=20
: > : >> subscribed to ss as: </FONT><A =
: > : >> href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: > : >> size=3D2>venumadhavj@hotmail.com</FONT></A><BR><FONT size=3D2>:
&gt;To
: > =
: > : >> unsubscribe=20
: > : >> send a blank email to </FONT><A=20
: > : >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > : >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A><BR><FONT
size=3D2>:
: > =
: > : >> &gt;<BR>:=20
: > : >> <BR>:=20
: > : >>
: > 
_____<=
: > : >> BR>:=20
: > : >> Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
: > : >> href=3D"http://www.hotmail.com"><FONT=20
: > : >> size=3D2>http://www.hotmail.com</FONT></A><BR><FONT size=3D2>:
<BR>: =
: > : >> <BR>: ---<BR>:=20
: > : >> You are currently subscribed to ss as: </FONT><A=20
: > : >> href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > : >> size=3D2>k4bet@digital-wireless.com</FONT></A><BR><FONT size=3D2>:
To =
: > : >> unsubscribe=20
: > : >> send a blank email to </FONT><A=20
: > : >> href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > : >> size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A><BR><FONT
size=3D2>:
: > =
: > : >> <BR>:=20
: > : >> </FONT></DIV></BODY></HTML>
: > : >>
: > : >> ------=_NextPart_000_04CC_01BFED85.B40939C0--
: > : >>
: > : >>
: > : >>
: > : >>
: > : >>
: > : >> ---
: > : >>
: > : >> END OF DIGEST
: > : >>
: > : >> ---
: > : >> You are currently subscribed to ss as: ussailis@shaysnet.com
: > : >> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : >>
: > : >>
: > : >
: > : >---
: > : >You are currently subscribed to ss as: kp4djt@tampabay.rr.com
: > : >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : >
: > :
: > : Chuck Hast                                e-mail
kp4djt@tampabay.rr.com
: > :
: > :    ---- FPAC ----
: > : www.qsl.net/fpac/
: > :
: > :
: > : ---
: > : You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

: > :
: > :
: >
: >
: >
: > --
: >
: > Subject: Re: ss digest: July 14, 2000
: > From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > Date: Mon, 17 Jul 2000 09:27:11 -0400
: > X-Message-Number: 2
: >
: > Jim... you probably are not listening to the various microwave ovens
that we
: > have gone out & purchased, off the shelf @ local consumer outlets, put
them
: > on the bench & plug them in! Man... their local oscillators (WHICH DO
NOT
: > OPERATE @ THE OUTPUT FREQUENCIES) are radiating birdies all over the
: > place... some at very high levels and exceeding FCC allowable limits!
: >
: > The whole world has paging systems operating in the 400 MHz band... the
: > keyless entry, MTS paging, (some of these systems run 300 watts ERP)
etc.,
: > etc. are in the high end of 450 - 500 MHz.... simple math times two puts
the
: > first harmonic in the 900 ISM band... other frequencies falling right
out
: > side (above - below the 900 MHz band) beating with other services also
: > creates a ton of crud!
: >
: > The uses for the digital SS technology in a rural area is very remote...

: >
: > Paul McInnish - K4BET
: > Manager, Business Development
: > Digital Wireless Corp.
: > One Meca Way
: > Norcross, GA 30093, USA
: > Pho: 770.564.5540, Ext. 2342
: > Fax: 770.564.5541
: > Cellular Phone: 678.429.2124
: > OEM E-mail: k4bet@digital-wireless.com
: > http://www.digital-wireless.com
: > SSuRFnet E-mail: k4bet@ssurfnet.com
: > http://www.ssurfnet.com
: >
: > Visit with us at ISA Expo 2000!
: > Booth 1843
: > 21 - 24 August, 2000
: > New Orleans, LA USA
: > http://www.isa.org/events/
: > ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
: > New address (bigger and much nicer);
: > Effective 14 August 2000:
: >
: > Digital Wireless Corporation
: > 5375 Oakbrook Parkway
: > Norcross, GA 30093 USA
: > Pho: 678.684.2000
: > Fax: 678.684.2001
: >
: > ----- Original Message -----
: > From: "Jim Ussailis" <ussailis@equinox.shaysnet.com>
: > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: > Cc: "ss digest recipients" <ss@lists.tapr.org>
: > Sent: Saturday, July 15, 2000 8:43 PM
: > Subject: [ss] Re: ss digest: July 14, 2000
: >
: >
: > : Something I don't understand regarding intermod in the 900 MHz ISM
band...
: > :
: > : Microwave ovens are at 2450 MHz +- 50 MHz, pagers are at 929 MHz and
up.
: > : I don't doubt about the harmonics from TV stations in metro areas,
but...
: > :
: > : I listed to the 900 MHz band almost daily, and hear nothing, or see

: > : nothing on the analyser. Of course I am in a rural area.
: > :
: > : We do have several pagers around 931. The rest of it is very quiet.
: > :
: > :
: > : Jim Ussailis, W1EQO
: > :
: > : National Wireless, Inc
: > :
: > :
: > : On Sat, 15 Jul 2000, TAPR Spread Spectrum Special Interest Group
digest
: > wrote:
: > :
: > : > TAPR Spread Spectrum Special Interest Group Digest for Friday, July
14,
: > 2000.
: > : >
: > : > 1. Re: Right Direction
: > : > 2. Re: Right Direction
: > : > 3. Re: Right Direction
: > : > 4. Re: Right Direction
: > : > 5. Re: Right Direction
: > : >
: > :
> --
: > : >
: > : > Subject: Re: Right Direction
: > : > From: Derek Lassen <kn6td@clubnet.net>
: > : > Date: Fri, 14 Jul 2000 01:51:40 -0700
: > : > X-Message-Number: 1
: > : >
: > : > Anybody get one yet?
: > : > What's the processor?
: > : >
: > : > I wonder if there is a market for a game server / range extender
(small
: > : > enough to stay in the backpack).
: > : >
: > : > :>
: > : >
: > : > (s) Derek
: > : >
: > : > At 10:03 PM 7/13/00 -0600, you wrote:
: > : > >I hate to rain on your parade, but going in the right direction for
: > : > >what? Wireless chat at 150'? If the person's that close I'll get up
and
: > : > >talk to them eye to eye. Organizer? Maybe... but it's bigger than a
: > : > >Palm. Internet? screen's kind of small ain't it? Games? I wish I
had
: > the
: > : > >time. Friend finder? Maybe it'll come in handy at the next Rolling
: > : > >Stones Concert. This is a toy if I've ever seen one. Maybe
something
: > fun
: > : > >for the kids. I can't imagine what I'd use it for. Someone
obviously
: > : > >disagrees with me and has put beaucoup bucks into it to be able to
sell
: > : > >the thing for $129. Maybe I'll get one for my kid for xmas.
: > : > >
: > : > >bah humbug
: > : > >
: > : > >--Dave
: > : > >
: > : > >"William C. Hast" wrote:
: > : > >
: > : > > > Folks:
: > : > > > These guys are going the right direction, the just
: > : > > > need to put in a real SS RF deck.
: > : > > >
: > : > > > Go take a look at it and see what you think.
: > : > > >
: > : > > > http://www.cybiko.com/
: > : > > >
: > : > > > I think that they have the right concept. They
: > : > > > just need to do a bit of work on it.
: > : > > >
: > : > > > ---

: > : > > > You are currently subscribed to ss as: depagnier@uswest.net
: > : > > > To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : > >
: > : > >
: > : > >---
: > : > >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
: > : > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : >
: > : >
: > : >
: > :
> --
: > : >
: > : > Subject: Re: Right Direction
: > : > From: Derek Lassen <kn6td@clubnet.net>
: > : > Date: Fri, 14 Jul 2000 01:59:33 -0700
: > : > X-Message-Number: 2
: > : >
: > : > I just looked at the web site - I shoulda RTFM. Sorry.
: > : >
: > : > Its based on a 4 MHz, 32 bit H8/S with 256k of RAM and 1M of flash.
It
: > : > seems to have a compact flash.
: > : >
: > : > RF communications is via 19k on 915 MHz GMSK.
: > : >
: > : > 73 de KN6TD
: > : >
: > : > (s) Derek
: > : >
: > : > At 01:51 AM 7/14/00 -0700, you wrote:
: > : > >Anybody get one yet?
: > : > >What's the processor?
: > : > >
: > : > >I wonder if there is a market for a game server / range extender
(small
: > : > >enough to stay in the backpack).
: > : > >
: > : > >:>
: > : > >
: > : > >(s) Derek
: > : > >
: > : > >At 10:03 PM 7/13/00 -0600, you wrote:
: > : > >>I hate to rain on your parade, but going in the right direction
for
: > : > >>what? Wireless chat at 150'? If the person's that close I'll get
up
: > and
: > : > >>talk to them eye to eye. Organizer? Maybe... but it's bigger than
a
: > : > >>Palm. Internet? screen's kind of small ain't it? Games? I wish I
had
: > the
: > : > >>time. Friend finder? Maybe it'll come in handy at the next Rolling
: > : > >>Stones Concert. This is a toy if I've ever seen one. Maybe
something
: > fun
: > : > >>for the kids. I can't imagine what I'd use it for. Someone
obviously
: > : > >>disagrees with me and has put beaucoup bucks into it to be able to
: > sell
: > : > >>the thing for $129. Maybe I'll get one for my kid for xmas.
: > : > >>
: > : > >>bah humbug
: > : > >>
: > : > >>--Dave
: > : > >>
: > : > >>"William C. Hast" wrote:
: > : > >>
: > : > >> > Folks:
: > : > >> > These guys are going the right direction, the just
: > : > >> > need to put in a real SS RF deck.
: > : > >> >
: > : > >> > Go take a look at it and see what you think.
: > : > >> >
: > : > >> > http://www.cybiko.com/
: > : > >> >
: > : > >> > I think that they have the right concept. They

: > : > >> > just need to do a bit of work on it.
: > : > >> >
: > : > >> > ---
: > : > >> > You are currently subscribed to ss as: depagnier@uswest.net
: > : > >> > To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : >
: > : >
: > : >
: > :
> --
: > : >
: > : > Subject: Re: Right Direction
: > : > From: "venumadhav josyula" <venumadhavj@hotmail.com>
: > : > Date: Fri, 14 Jul 2000 04:33:31 PDT
: > : > X-Message-Number: 3
: > : >
: > : > hey paul,
: > : >
: > : > I am student doing my masters in ee, my area of specilization is ss
and
: > : > datacommunications.
: > : >
: > : > 1   you say all the intermod that is generated in this band is
unreal
: > : > why is this?
: > : > 2 secondly what is reason of using 2.4ghz.
: > : > 3 Are you talking about wireless internet and data services ?
: > : >
: > : > thanking you
: > : > yours sincerely
: > : >
: > : >
: > : >
: > : > >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
: > <ss@lists.tapr.org>
: > : > >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : > >Subject: [ss] Re: Right Direction
: > : > >Date: Thu, 13 Jul 2000 16:22:39 -0400
: > : > >MIME-Version: 1.0
: > : > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
: > : > >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12 2000
: > : > >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: > : > >Return-Path: <PMcinnish@digiwrls.com>
: > : > >Message-ID:
: > : >
: >
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.org
: > >
: > : > >References:
: > : >
: >
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.tapr.
: > org>
: > : > >Organization: Digital Wireless Corporation
: > : > >X-Priority: 3
: > : > >X-MSMail-Priority: Normal
: > : > >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: > : > >X-MDaemon-Deliver-To: ss@lists.tapr.org
: > : > >X-Return-Path: pmcinnish@digiwrls.com
: > : > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: > : > >List-Software: Lyris Server version 3.0
: > : > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: > : > >List-Owner: <mailto:owner-ss@lists.tapr.org>
: > : > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: > : > >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: > : > >Sender: bounce-ss-17222@lists.tapr.org
: > : > >Precedence: bulk
: > : > >
: > : > >Yep... NOT SS and range is limited to just a few feet!
: > : > >
: > : > >Also, their choice of the 900 MHz ISM band is a horrible mistake...
: > QRM,
: > : > >QRN, and all the intermod generated that falls into this band is
: > unreal!
: > : > >Main reason we discontinued all products in 900 MHz ISM band and
went

: > to
: > : > >2.4
: > : > >GHz ISM band... also allows us to ship world wide (very high
acceptance
: > of
: > : > >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be
sold
: > in
: > : > >USA, Canada and Mexico (legally).
: > : > >
: > : > >73,
: > : > >
: > : > >Paul McInnish - K4BET
: > : > >Manager, Business Development
: > : > >Digital Wireless Corp.
: > : > >One Meca Way
: > : > >Norcross, GA 30093, USA
: > : > >Pho: 770.564.5540, Ext. 2342
: > : > >Fax: 770.564.5541
: > : > >Cellular Phone: 678.429.2124
: > : > >OEM E-mail: k4bet@digital-wireless.com
: > : > >http://www.digital-wireless.com
: > : > >SSuRFnet E-mail: k4bet@ssurfnet.com
: > : > >http://www.ssurfnet.com
: > : > >
: > : > >Visit with us at ISA Expo 2000!
: > : > >Booth 1843
: > : > >21 - 24 August, 2000
: > : > >New Orleans, LA USA
: > : > >http://www.isa.org/events/
: > : > >
: > : > >----- Original Message -----
: > : > >From: "William C. Hast" <wchast@utilpart.com>
: > : > >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : > >Sent: Thursday, July 13, 2000 2:46 PM
: > : > >Subject: [ss] Right Direction
: > : > >
: > : > >
: > : > >: Folks:
: > : > >: These guys are going the right direction, the just
: > : > >: need to put in a real SS RF deck.
: > : > >:
: > : > >: Go take a look at it and see what you think.
: > : > >:
: > : > >: http://www.cybiko.com/
: > : > >:
: > : > >: I think that they have the right concept. They
: > : > >: just need to do a bit of work on it.
: > : > >:
: > : > >: ---
: > : > >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : > >: To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : > >:
: > : > >:
: > : > >
: > : > >
: > : > >
: > : > >---
: > : > >You are currently subscribed to ss as: venumadhavj@hotmail.com
: > : > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : > >
: > : >
: > : >
____
: > : > Get Your Private, Free E-mail from MSN Hotmail at
http://www.hotmail.com
: > : >
: > : >
: > :
> --
: > : >
: > : > Subject: Re: Right Direction
: > : > From: "Hast, Chuck" <wchast@utilpart.com>
: > : > Date: Fri, 14 Jul 2000 07:32:35 -0400
: > : > X-Message-Number: 4
: > : >
: > : > I called them and talked to them. They appear VERY open to

: > : > ideas and recommendations. Indeed the RF deck is a deck
: > : > out of a 900 MHz discrete channel phone (as told to me by
: > : > them) there are 30 selectable channels and according to the
: > : > propaganda each channel can support up to 100 interconnected
: > : > users.
: > : >
: > : > For those who do not think much of it, I guess it ain't much but
: > : > like my grandmomma said one day, "wish in one hand and spit
: > : > in the other and see which fills the fastest", some times I think
: > : > we do a lot of wishing and not enough spittin', so here we
: > : > stand empty handed, and some company out there is bringing
: > : > out the beginnings of the box we have been wishing for.
: > : >
: > : > In talking to them they sounded like the would like to develop
: > : > a device and a network concept that would be like the ricochet
: > : > system, or a cell like system, but they were VERY open to
: > : > ideas and recommendations.
: > : >
: > : > They also want to do voice, but do not handle it yet. I believe
: > : > the sound part is all there it is probably a software issue.
: > : >
: > : > I will repeat my self again, if we want to get some volume on
: > : > these things we are going to have to get the volume radio users
: > : > (voice users) involved, or I fear we will continue to spend a lot
: > : > of time wishing. I totally favor a data world, but reality is that
: > : > the world is a voice world, and the best way to get volume is
: > : > to convert that voice into a data stream and then do neat magic
: > : > with it that will make the voice users want to get on your system,
: > : > pay the (insert monetary unit here) to do so and keep from draining
: > : > YOUR pocket so much.
: > : >
: > : > Yes this box is crude and rude but, it is a start. I can probably do
: > : > better with a Casio Cassiopeia (sp?) with a PC card slot full of
radio,
: > : > some software in there to handle the voice part and a access point
: > : > well place on top of my building to use it a few hundred yards from
: > : > the building, but the cost is now up there at over 1K USD.
: > : >
: > : > If they can keep the cost on this down near where it is now, and
: > : > still field a SS device that can work through a hub or SS repeater,
: > : > and carry a bit of power behind it (up to the 1 watt part 15 max)
: > : > then they are really going the right direction for the volume user.
: > : >
: > : > Go out and look at the web site, give them a call, or a e-mail and
: > : > see what you make of it.
: > : >
: > : >
: > : >
: > : >
: > :
> --
: > : >
: > : > Subject: Re: Right Direction
: > : > From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : > Date: Fri, 14 Jul 2000 11:21:49 -0400
: > : > X-Message-Number: 5
: > : >
: > : > This is a multi-part message in MIME format.
: > : >
: > : > ------=_NextPart_000_04CC_01BFED85.B40939C0
: > : > Content-Type: text/plain;
: > : > charset="Windows-1252"
: > : > Content-Transfer-Encoding: quoted-printable
: > : >
: > : > See response embedded below:
: > : >
: > : > Paul McInnish - K4BET
: > : > Manager, Business Development
: > : > Digital Wireless Corp.
: > : > One Meca Way
: > : > Norcross, GA 30093, USA
: > : > Pho: 770.564.5540, Ext. 2342
: > : > Fax: 770.564.5541
: > : > Cellular Phone: 678.429.2124
: > : > OEM E-mail: k4bet@digital-wireless.com
: > : > http://www.digital-wireless.com
: > : > SSuRFnet E-mail: k4bet@ssurfnet.com
: > : > http://www.ssurfnet.com
: > : >

: > : > Visit with us at ISA Expo 2000!
: > : > Booth 1843
: > : > 21 - 24 August, 2000
: > : > New Orleans, LA USA
: > : > http://www.isa.org/events/
: > : > ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
: > : > New address (bigger and much nicer);
: > : > Effective 14 August 2000:
: > : >
: > : > Digital Wireless Corporation
: > : > 5375 Oakbrook Parkway
: > : > Norcross, GA 30093 USA
: > : > Pho: 678.684.2000
: > : > Fax: 678.684.2001
: > : >
: > : > ----- Original Message -----=20
: > : > From: "venumadhav josyula" <venumadhavj@hotmail.com>
: > : > To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : > Sent: Friday, July 14, 2000 7:33 AM
: > : > Subject: [ss] Re: Right Direction
: > : >
: > : >
: > : > : hey paul,
: > : > :=20
: > : > : I am student doing my masters in ee, my area of specilization is
ss =
: > : > and=20
: > : > : datacommunications.
: > : > :=20
: > : > : 1   you say all the intermod that is generated in this band is
unreal
: > =
: > : >   =20
: > : > : why is this?
: > : > It is 2nd., 3rd. and 4th. order harmonics from paging systems,
two-way =
: > : > radio systems, TV stations, microwave ovens, etc. We have taken =
: > : > (usually in larger metro areas, a spectrum analyzer and taken a look
at
: > =
: > : > 900 MHz ISM band... and the display looks like a "Prarie Grass field
in
: > =
: > : > a 50 mile per hour wind and majority of the 'jamming' signals are
very =
: > : > high in amplitude. No way can critical data applications tolerate
this.
: > =
: > : > Life Support? Critical Monitoring? Nuclear Plant monitoring? Factory
=
: > : > Automation control?
: > : >
: > : > : 2 secondly what is reason of using 2.4ghz.
: > : > As I stated in my original message: "QRM, QRN, and all the intermod
=
: > : > generated that falls into this band is unreal! Main reason we =
: > : > discontinued all products in 900 MHz ISM band and went to 2.4GHz ISM
=
: > : > band... also allows us to ship world wide (very high acceptance of =
: > : > product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be
sold =
: > : > in USA, Canada and Mexico (legally)."
: > : >
: > : >
: > : > : 3 Are you talking about wireless internet and data services ?
: > : > Our core business is commercial and industrial and we took this
proven =
: > : > and accepted OEM SS Transceiver Module and developed a line of ISP
and =
: > : > Ethernet products.
: > : >
: > : > I am doing some neat things at home with some of our products... in
the
: > =
: > : > event my home ISP is monitoring this server. just expermenting when
I =
: > : > tell this... "I have ADSL @ home & sending a full connection to/from
=

: > : > daugher & son-in-law a mile away! By bridging my LAN at home with
their
: > =
: > : > LAN at their home!" Using a router so the ISP only sees one IP!
(Also =
: > : > provides the firewall I need for security.)
: > : >
: > : > I hope the group does not object to any response such as this
because I
: > =
: > : > do not want to convert a 'ham radio oriented' list server into a =
: > : > commercial venture... however, I have a ball dealing in the SS
world. =
: > : > Its fun!
: > : >
: > : > :=20
: > : > : thanking you
: > : > : yours sincerely
: > : > :=20
: > : > :=20
: > : > :=20
: > : > : >From: "Paul McInnish" <pmcinnish@digiwrls.com>
: > : > : >Reply-To: "TAPR Spread Spectrum Special Interest Group" =
: > : > <ss@lists.tapr.org>
: > : > : >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : > : >Subject: [ss] Re: Right Direction
: > : > : >Date: Thu, 13 Jul 2000 16:22:39 -0400
: > : > : >MIME-Version: 1.0
: > : > : >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP
id=20
: > : > : >MHotMailBB3770DC00C3D820F3B6CC11D91808F50; Thu Jul 13 13:26:12
2000
: > : > : >From bounce-ss-17222@lists.tapr.org Thu Jul 13 13:28:28 2000
: > : > : >Return-Path: <PMcinnish@digiwrls.com>
: > : > : >Message-ID:=20
: > : > : =
: > : >
: >
><LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@lists.tapr.=
: > : > org>
: > : > : >References:=20
: > : > : =
: > : >
: >
><LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@lists.ta=
: > : > pr.org>
: > : > : >Organization: Digital Wireless Corporation
: > : > : >X-Priority: 3
: > : > : >X-MSMail-Priority: Normal
: > : > : >X-MimeOLE: Produced By Microsoft MimeOLE V5.50.4133.2400
: > : > : >X-MDaemon-Deliver-To: ss@lists.tapr.org
: > : > : >X-Return-Path: pmcinnish@digiwrls.com
: > : > : >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
: > : > : >List-Software: Lyris Server version 3.0
: > : > : >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
: > : > : >List-Owner: <mailto:owner-ss@lists.tapr.org>
: > : > : >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
: > : > : >X-Message-Id: <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: > : > : >Sender: bounce-ss-17222@lists.tapr.org
: > : > : >Precedence: bulk
: > : > : >
: > : > : >Yep... NOT SS and range is limited to just a few feet!
: > : > : >
: > : > : >Also, their choice of the 900 MHz ISM band is a horrible
mistake... =
: > : > QRM,
: > : > : >QRN, and all the intermod generated that falls into this band is
=
: > : > unreal!
: > : > : >Main reason we discontinued all products in 900 MHz ISM band and
went
: > =
: > : > to=20
: > : > : >2.4
: > : > : >GHz ISM band... also allows us to ship world wide (very high =
: > : > acceptance of
: > : > : >product line now we have moved to 2.4 GHz)... 900 MHz can ONLY be
=

: > : > sold in
: > : > : >USA, Canada and Mexico (legally).
: > : > : >
: > : > : >73,
: > : > : >
: > : > : >Paul McInnish - K4BET
: > : > : >Manager, Business Development
: > : > : >Digital Wireless Corp.
: > : > : >One Meca Way
: > : > : >Norcross, GA 30093, USA
: > : > : >Pho: 770.564.5540, Ext. 2342
: > : > : >Fax: 770.564.5541
: > : > : >Cellular Phone: 678.429.2124
: > : > : >OEM E-mail: k4bet@digital-wireless.com
: > : > : >http://www.digital-wireless.com
: > : > : >SSuRFnet E-mail: k4bet@ssurfnet.com
: > : > : >http://www.ssurfnet.com
: > : > : >
: > : > : >Visit with us at ISA Expo 2000!
: > : > : >Booth 1843
: > : > : >21 - 24 August, 2000
: > : > : >New Orleans, LA USA
: > : > : >http://www.isa.org/events/
: > : > : >
: > : > : >----- Original Message -----
: > : > : >From: "William C. Hast" <wchast@utilpart.com>
: > : > : >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
: > : > : >Sent: Thursday, July 13, 2000 2:46 PM
: > : > : >Subject: [ss] Right Direction
: > : > : >
: > : > : >
: > : > : >: Folks:
: > : > : >: These guys are going the right direction, the just
: > : > : >: need to put in a real SS RF deck.
: > : > : >:
: > : > : >: Go take a look at it and see what you think.
: > : > : >:
: > : > : >: http://www.cybiko.com/
: > : > : >:
: > : > : >: I think that they have the right concept. They
: > : > : >: just need to do a bit of work on it.
: > : > : >:
: > : > : >: ---
: > : > : >: You are currently subscribed to ss as:
k4bet@digital-wireless.com
: > : > : >: To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : > : >:
: > : > : >:
: > : > : >
: > : > : >
: > : > : >
: > : > : >---
: > : > : >You are currently subscribed to ss as: venumadhavj@hotmail.com
: > : > : >To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : > : >
: > : > :=20
: > : > : =
: > : >
_____
: > : > : Get Your Private, Free E-mail from MSN Hotmail at =
: > : > http://www.hotmail.com
: > : > :=20
: > : > :=20
: > : > : ---
: > : > : You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : > : To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
: > : > :=20
: > : > :=20
: > : >
: > : > ------=_NextPart_000_04CC_01BFED85.B40939C0
: > : > Content-Type: text/html;
: > : > charset="Windows-1252"
: > : > Content-Transfer-Encoding: quoted-printable
: > : >
: > : > <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

```
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: > : > <META content=3D"text/html; charset=3Dwindows-1252" =
: > : > http-equiv=3DContent-Type>
: > : > <META content=3D"MSHTML 5.00.3105.105" name=3DGENERATOR>
: > : > <STYLE></STYLE>
: > : > </HEAD>
: > : > <BODY>
: > : > <DIV><FONT size=3D2>See response embedded below:</FONT></DIV>
: > : > <DIV> </DIV>
: > : > <DIV><FONT size=3D2>Paul McInnish - K4BET<BR>Manager, Business=20
: > : > Development<BR>Digital Wireless Corp.<BR>One Meca Way<BR>Norcross,
GA =
: > : > 30093,=20
: > : > USA<BR>Pho: 770.564.5540, Ext. 2342<BR>Fax: 770.564.5541<BR>Cellular
=
: > : > Phone:=20
: > : > 678.429.2124<BR>OEM E-mail: </FONT><A=20
: > : > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > : > size=3D2>k4bet@digital-wireless.com</FONT></A><BR><A=20
: > : > href=3D"http://www.digital-wireless.com"><FONT=20
: > : > size=3D2>http://www.digital-wireless.com</FONT></A><BR><FONT =
: > : > size=3D2>SSuRFnet=20
: > : > E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_a
rchive/3D&amp;quot;mailto:k4bet@ssurfnet.com&amp;quot;"><FONT=20
: > : > size=3D2>k4bet@ssurfnet.com</FONT></A><BR><A =
: > : > href=3D"http://www.ssurfnet.com"><FONT=20
: > : > size=3D2>http://www.ssurfnet.com</FONT></A></DIV>
: > : > <DIV> </DIV>
: > : > <DIV><FONT size=3D2>Visit with us at ISA Expo 2000!<BR>Booth
1843<BR>21
: > =
: > : > - 24=20
: > : > August, 2000<BR>New Orleans, LA USA<BR></FONT><A=20
: > : > href=3D"http://www.isa.org/events/"><FONT=20
: > : > size=3D2>http://www.isa.org/events/</FONT></A><BR><FONT=20
: > : > size=3D2>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~<BR>New address (bigger and
: > much=20
: > : > nicer);<BR>Effective 14 August 2000:</FONT></DIV>
: > : > <DIV> </DIV>
: > : > <DIV><FONT size=3D2>Digital Wireless Corporation<BR>5375 Oakbrook=20
: > : > Parkway<BR>Norcross, GA 30093 USA<BR>Pho: 678.684.2000<BR>Fax:=20
: > : > 678.684.2001<BR></FONT></DIV>
: > : > <DIV><FONT size=3D2>----- Original Message ----- </FONT>
: > : > <DIV><FONT size=3D2>From: "venumadhav josyula" &lt;</FONT><A=20
: > : > href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: > : > size=3D2>venumadhavj@hotmail.com</FONT></A><FONT =
: > : > size=3D2>&gt;</FONT></DIV>
: > : > <DIV><FONT size=3D2>To: "TAPR Spread Spectrum Special Interest
Group"=20
: > : > &lt;</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archi
ve/3D&amp;quot;mailto:ss@lists.tapr.org&amp;quot;"><FONT=20
: > : > size=3D2>ss@lists.tapr.org</FONT></A><FONT
size=3D2>&gt;</FONT></DIV>
: > : > <DIV><FONT size=3D2>Sent: Friday, July 14, 2000 7:33 AM</FONT></DIV>
: > : > <DIV><FONT size=3D2>Subject: [ss] Re: Right
Direction</FONT></DIV></DIV>
: > : > <DIV><BR></DIV>
: > : > <DIV><FONT size=3D2>: hey paul,<BR>: <BR>: I am student doing my
masters
: > =
: > : > in ee, my=20
: > : > area of specilization is ss and <BR>: datacommunications.<BR>:
<BR>:=20
: > : > 1   you say all the intermod that is generated in this
band is
: > =
: > : >
: > : > unreal     <BR>: why is this?</FONT></DIV>
: > : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>It is 2nd., 3rd. and
=
: > : > 4th. order=20
: > : > harmonics from paging systems, two-way radio systems, TV stations, =
: > : > microwave=20
: > : > ovens, etc.  We have taken (usually in larger metro areas, a =
: > : > spectrum=20
: > : > analyzer and taken a look at 900 MHz ISM band... and the
display =
: > : > looks like=20
: > : > a "Prarie Grass field in a 50 mile per hour wind and majority of the
```

```
=
: > : > 'jamming'=20
: > : > signals are very high in amplitude.  No way can critical data =
: > : > applications=20
: > : > tolerate this. Life Support? Critical Monitoring? Nuclear Plant =
: > : > monitoring?=20
: > : > Factory Automation control?</EM></STRONG></FONT></DIV>
: > : > <DIV><FONT size=3D2><BR>: 2  secondly what is reason of
using=20
: > : > 2.4ghz.</FONT></DIV>
: > : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>As I stated in my =
: > : > original message:=20
: > : > "QRM, QRN, and all the intermod generated that falls into this
band
: > =
: > : > is=20
: > : > unreal! Main reason we discontinued all products in 900 MHz ISM band
and
: > =
: > : > went=20
: > : > to 2.4GHz ISM band... also allows us to ship world wide (very
: > high=20
: > : > acceptance of product line now we have moved to 2.4 GHz)... 900 MHz
can
: > =
: > : > ONLY be=20
: > : > sold in USA, Canada and Mexico =
: > : > (legally)."<BR></EM></STRONG></FONT></DIV>
: > : > <DIV><FONT size=3D2><BR>: 3  Are you talking about wireless =
: > : > internet and data=20
: > : > services ?</FONT></DIV>
: > : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>Our core business is
=
: > : > commercial and=20
: > : > industrial and we took this proven and accepted OEM SS
Transceiver
: > =
: > : > Module=20
: > : > and developed a line of ISP and Ethernet =
: > : > products.</EM></STRONG></FONT></DIV>
: > : > <DIV> </DIV>
: > : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I am doing some neat
=
: > : > things at home=20
: > : > with some of our products... in the event my home ISP is monitoring
this
: > =
: > : > server.=20
: > : > just expermenting when I tell this... "I have ADSL @ home &amp;
sending
: > =
: > : > a full=20
: > : > connection to/from daugher &amp; son-in-law a mile away! 
By =
: > : > bridging=20
: > : > my LAN at home with their LAN at their home!" Using a router so the
ISP
: > =
: > : > only=20
: > : > sees one IP! (Also provides the firewall I need for=20
: > : > security.)</EM></STRONG></FONT></DIV>
: > : > <DIV> </DIV>
: > : > <DIV><FONT color=3D#ff0000 size=3D2><STRONG><EM>I hope the group
does =
: > : > not object=20
: > : > to any response such as this because I do not want to convert a
=
: > : > 'ham radio=20
: > : > oriented' list server into a commercial venture... however, I have a
=
: > : > ball=20
: > : > dealing in the SS world.  Its fun!</EM></STRONG></FONT></DIV>
: > : > <DIV><FONT size=3D2><BR>: <BR>: thanking you<BR>: yours
sincerely<BR>: =
: > : > <BR>: <BR>:=20
: > : > <BR>: &gt;From: "Paul McInnish" &lt;</FONT><A=20
: > : > href=3D"mailto:pmcinnish@digiwrls.com"><FONT=20
: > : > size=3D2>pmcinnish@digiwrls.com</FONT></A><FONT size=3D2>&gt;<BR>: =
: > : > &gt;Reply-To:=20
```

: > : > "TAPR Spread Spectrum Special Interest Group" <</FONT><A=20
: > : > href=3D"mailto:ss@lists.tapr.org"><FONT =
: > : > size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: > : > size=3D2>>
: >To: "TAPR Spread Spectrum Special Interest
Group"
: > =
: > : >
: > : > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archi
ve/3D"mailto:ss@lists.tapr.org""><FONT=20
: > : > size=3D2>ss@lists.tapr.org</FONT></A><FONT size=3D2>>
: =
: > : > >Subject: [ss] Re:=20
: > : > Right Direction
: >Date: Thu, 13 Jul 2000
16:22:39 -0400
:=20
: > : > >MIME-Version: 1.0
: >Received: from [204.17.217.24] by =
: > : > hotmail.com=20
: > : > (3.2) with ESMTP id <BR>:
>MHotMailBB3770DC00C3D820F3B6CC11D91808F50;
: > =
: > : > Thu Jul=20
: > : > 13 13:26:12 2000
: >From </FONT><A=20
: > : > href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: > : > size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A><FONT size=3D2>
Thu =
: > : > Jul 13=20
: > : > 13:28:28 2000
: >Return-Path: <</FONT><A=20
: > : > href=3D"mailto:PMcinnish@digiwrls.com"><FONT=20
: > : > size=3D2>PMcinnish@digiwrls.com</FONT></A><FONT size=3D2>>
: =
: > : > >Message-ID:=20
: > : >
: ><</FONT><A=20
: > : >
: >
href=3D"mailto:LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.co=
: > : > m@lists.tapr.org"><FONT=20
: > : >
: >
size=3D2>LYR17222-96403-2000.07.13-15.29.12--venumadhavj#hotmail.com@list=
: > : > s.tapr.org</FONT></A><FONT=20
: > : > size=3D2>>
: >References: <BR>: ><</FONT><A=20
: > : >
: >
href=3D"mailto:LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless=
: > : > .com@lists.tapr.org"><FONT=20
: > : >
: >
size=3D2>LYR18702-96392-2000.07.13-14.51.03--k4bet#digital-wireless.com@l=
: > : > ists.tapr.org</FONT></A><FONT=20
: > : > size=3D2>>
: >Organization: Digital Wireless
: > Corporation
:=20
: > : > >X-Priority: 3
: >X-MSMail-Priority: Normal
:
>X-MimeOLE:
: > =
: > : >
: > : > Produced By Microsoft MimeOLE V5.50.4133.2400
: =
: > : > >X-MDaemon-Deliver-To:=20
: > : > </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3
D"mailto:ss@lists.tapr.org""><FONT=20
: > : > size=3D2>ss@lists.tapr.org</FONT></A>
<FONT size=3D2>: =
: > : > >X-Return-Path:=20
: > : > </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3
D"mailto:pmcinnish@digiwrls.com""><FONT=20
: > : > size=3D2>pmcinnish@digiwrls.com</FONT></A>
<FONT size=3D2>: =
: > : > >List-Unsubscribe:=20
: > : > <</FONT><A
href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/3D"mailto:leav
e-ss-6751T@lists.tapr.org""><FONT=20
: > : > size=3D2>mailto:leave-ss-6751T@lists.tapr.org</FONT></A><FONT =
: > : > size=3D2>>
:=20
: > : > >List-Software: Lyris Server version 3.0
:
>List-Subscribe:=20
: > : > <</FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archi
ve/3D"mailto:subscribe-ss@lists.tapr.org""><FONT=20
: > : > size=3D2>mailto:subscribe-ss@lists.tapr.org</FONT></A><FONT =
: > : > size=3D2>>
:=20
: > : > >List-Owner: <</FONT><A =
: > : > href=3D"mailto:owner-ss@lists.tapr.org"><FONT=20
: > : > size=3D2>mailto:owner-ss@lists.tapr.org</FONT></A><FONT =
: > : > size=3D2>>
:=20
: > : > >X-List-Host: Tucson Amateur Packet Radio <</FONT><A=20
: > : > href=3D"http://www.tapr.org"><FONT =

: > : > size=3D2>http://www.tapr.org</FONT></A><FONT=20
: > : > size=3D2>>
: >X-Message-Id:=20
: > : > <00cb01bfed08$1729cd40$3a00a8c0@oemcomputer>
: >Sender:
=
: > : > </FONT><A=20
: > : > href=3D"mailto:bounce-ss-17222@lists.tapr.org"><FONT=20
: > : > size=3D2>bounce-ss-17222@lists.tapr.org</FONT></A>
<FONT
: > size=3D2>:=20
: > : > >Precedence: bulk
: >
: >Yep... NOT SS and range is =
: > : > limited to=20
: > : > just a few feet!
: >
: >Also, their choice of the 900
MHz =
: > : > ISM band=20
: > : > is a horrible mistake... QRM,
: >QRN, and all the intermod =
: > : > generated that=20
: > : > falls into this band is unreal!
: >Main reason we discontinued
all
: > =
: > : >
: > : > products in 900 MHz ISM band and went to <BR>: >2.4
: >GHz
ISM
: > =
: > : > band...=20
: > : > also allows us to ship world wide (very high acceptance of
: =
: > : > >product line=20
: > : > now we have moved to 2.4 GHz)... 900 MHz can ONLY be sold in
: =
: > : > >USA,=20
: > : > Canada and Mexico (legally).
: >
: >73,
: >
: =
: > : > >Paul=20
: > : > McInnish - K4BET
: >Manager, Business Development
:
>Digital
: > =
: > : >
: > : > Wireless Corp.
: >One Meca Way
: >Norcross, GA 30093, =
: > : > USA
:=20
: > : > >Pho: 770.564.5540, Ext. 2342
: >Fax: 770.564.5541
: =
: > : > >Cellular=20
: > : > Phone: 678.429.2124
: >OEM E-mail: </FONT><A=20
: > : > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>: =
: > : > ></FONT><A=20
: > : > href=3D"http://www.digital-wireless.com"><FONT=20
: > : > size=3D2>http://www.digital-wireless.com</FONT></A>
<FONT
size=3D2>:
: > =
: > : > >SSuRFnet=20
: > : > E-mail: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_a
rchive/3D"mailto:k4bet@ssurfnet.com""><FONT=20
: > : > size=3D2>k4bet@ssurfnet.com</FONT></A>
<FONT size=3D2>:
></FONT><A
: > =
: > : >
: > : > href=3D"http://www.ssurfnet.com"><FONT=20
: > : > size=3D2>http://www.ssurfnet.com</FONT></A>
<FONT size=3D2>: =
: > : > >
: >Visit=20
: > : > with us at ISA Expo 2000!
: >Booth 1843
: >21 - 24
August, =
: > : > 2000
:=20
: > : > >New Orleans, LA USA
: ></FONT><A=20
: > : > href=3D"http://www.isa.org/events/"><FONT=20
: > : > size=3D2>http://www.isa.org/events/</FONT></A>
<FONT size=3D2>: =
: > : > >
:=20
: > : > >----- Original Message -----
: >From: "William C. Hast" =
: > : > <</FONT><A=20
: > : > href=3D"mailto:wchast@utilpart.com"><FONT=20
: > : > size=3D2>wchast@utilpart.com</FONT></A><FONT size=3D2>>
:
>To:
: > =
: > : > "TAPR Spread=20
: > : > Spectrum Special Interest Group" <</FONT><A=20
: > : > href=3D"mailto:ss@lists.tapr.org"><FONT =
: > : > size=3D2>ss@lists.tapr.org</FONT></A><FONT=20
: > : > size=3D2>>
: >Sent: Thursday, July 13, 2000 2:46 PM
: =
: > : > >Subject:=20
: > : > [ss] Right Direction
: >
: >
: >: Folks:
:
>: =
: > : > These guys=20
: > : > are going the right direction, the just
: >: need to put in a
real

: > =
: > : > SS RF=20
: > : > deck.
: >:
: >: Go take a look at it and see what you =
: > : > think.
:=20
: > : > >:
: >: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-s
ig/mail_archive/3D"http://www.cybiko.com/""><FONT=20
: > : > size=3D2>http://www.cybiko.com/</FONT></A>
<FONT size=3D2>: =
: > : > >:
: >: I=20
: > : > think that they have the right concept. They
: >: just need to
do
: > =
: > : > a bit of=20
: > : > work on it.
: >:
: >: ---
: >: You are currently =
: > : > subscribed to=20
: > : > ss as: </FONT><A href="http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_ar
chive/3D"mailto:k4bet@digital-wireless.com""><FONT=20
: > : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>:
>:
: > =
: > : > To=20
: > : > unsubscribe send a blank email to </FONT><A=20
: > : > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > : > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT
size=3D2>: =
: > : > >:
:=20
: > : > >:
: >
: >
: >
: >---
: >You are =
: > : > currently=20
: > : > subscribed to ss as: </FONT><A =
: > : > href=3D"mailto:venumadhavj@hotmail.com"><FONT=20
: > : > size=3D2>venumadhavj@hotmail.com</FONT></A>
<FONT size=3D2>:
>To =
: > : > unsubscribe=20
: > : > send a blank email to </FONT><A=20
: > : > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > : > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT
size=3D2>: =
: > : > >
:=20
: > : >
:=20
: > : >
: >
_____<=
: > : > BR>:=20
: > : > Get Your Private, Free E-mail from MSN Hotmail at </FONT><A=20
: > : > href=3D"http://www.hotmail.com"><FONT=20
: > : > size=3D2>http://www.hotmail.com</FONT></A>
<FONT size=3D2>: <BR>:
=
: > : >
: ---
:=20
: > : > You are currently subscribed to ss as: </FONT><A=20
: > : > href=3D"mailto:k4bet@digital-wireless.com"><FONT=20
: > : > size=3D2>k4bet@digital-wireless.com</FONT></A>
<FONT size=3D2>:
To =
: > : > unsubscribe=20
: > : > send a blank email to </FONT><A=20
: > : > href=3D"mailto:leave-ss-6751T@lists.tapr.org"><FONT=20
: > : > size=3D2>leave-ss-6751T@lists.tapr.org</FONT></A>
<FONT
size=3D2>: =
: > : >
:=20
: > : > </FONT></DIV></BODY></HTML>
: > : >
: > : > ------=_NextPart_000_04CC_01BFED85.B40939C0--
: > : >
: > : >
: > : >
: > : >
: > : >
: > : > ---
: > : >
: > : > END OF DIGEST
: > : >
: > : > ---
: > : > You are currently subscribed to ss as: ussailis@shaysnet.com
: > : > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > : >
: > : >
: > :
: > : ---
: > : You are currently subscribed to ss as: k4bet@digital-wireless.com
: > : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > :

: > :
: >
: >
: >
: > --
: >
: > Subject: Spread Spectrum
: > From: GKadir@aol.com
: > Date: Mon, 17 Jul 2000 13:20:26 EDT
: > X-Message-Number: 3
: >
: > Hi All
: >
: >
: > I don't if you can help me on an issue I am currently working on. I am
: > trying to use One VSAT antenna for 3 remote site in Bangladesh. Each
site has
: > 10 lines, and want to connect them so that they all link up with the
main
: > site and use the one antenna. I also need to know can we use one
multiplexer
: > at the main site and interconnect via spread spectrum or do we need 3
: > multipledxers each at one site. We are trying to connect our UK offices
to
: > Bangladesh and want to know the best and cost effective way to do it.
We
: > certainly don't want to put up 3 VSAT antenna each at one site, which
: > certainly will drive up our cost.
: >
: >
: >
: > Thanking you in advance for your recommendations.
: >
: > Kadir
: >
: > --
: >
: > Subject: Re: Spread Spectrum
: > From: Derek Lassen <kn6td@clubnet.net>
: > Date: Mon, 17 Jul 2000 13:10:18 -0700
: > X-Message-Number: 4
: >
: > You left out three critical pieces of information:
: > How far are the remote sites from the central site?
: > Can the remote sites see the central site by radio line of sight?
: > How much thruput do you need (minimum and maximum).
: >
: > A first cut WAG would be get 4 towers, 6 old WaveLAN 915 MHz cards
(higher
: > power and cheap), 6 ten element 915MHz Yagi antennas, and 6 runs of
Coax.
: >
: > HTH.
: >
: > (s) Derek
: >
: >
: > At 01:20 PM 7/17/00 -0400, GKadir@aol.com wrote:
: > >Hi All
: > >
: > >
: > >I don't if you can help me on an issue I am currently working on. I am
: > >trying to use One VSAT antenna for 3 remote site in Bangladesh. Each
site has
: > >10 lines, and want to connect them so that they all link up with the
main
: > >site and use the one antenna. I also need to know can we use one
multiplexer
: > >at the main site and interconnect via spread spectrum or do we need 3
: > >multipledxers each at one site. We are trying to connect our UK offices
to
: > >Bangladesh and want to know the best and cost effective way to do it.
We
: > >certainly don't want to put up 3 VSAT antenna each at one site, which
: > >certainly will drive up our cost.
: > >
: > >
: > >
: > >Thanking you in advance for your recommendations.

: > >
: > >Kadir
: > >
: > >---
: > >You are currently subscribed to ss as: KN6TD@CLUBNET.NET
: > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >
: >
: >
: >
: > ---
: >
: > END OF DIGEST
: >
: > ---
: > You are currently subscribed to ss as: ussailis@shaysnet.com
: > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

42. [ss] dsss pn codes

From: avraham kurtz <kurtz@beitza.jct.ac.il>
Date: Tue, 25 Jul 2000 18:19:15 +0300 (IDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-98419-2000.07.25-10.23.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello,
 I plan to use a pn code with 16 bit shift register, I was wondering if
someone can give me the feedback tap points for a m-length code.
Thank you
Avraham Kurtz

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

43. [ss] Re: ss digest: July 24, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Tue, 25 Jul 2000 14:38:57 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-98473-2000.07.25-13.42.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Who, out there, has built a Costas loop?

I am looking for a circuit that I can adapt to an IF at 62.5 MHz.

Jim Ussailis, W1EQO

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

44. [ss] Re: dsss pn codes

From: "venumadhav josyula" <venumadhavj@hotmail.com>
Date: Tue, 25 Jul 2000 11:01:30 PDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-98469-2000.07.25-13.06.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

What do u plan it use it for ? First you got to find the generator
polynomail for it. I an right now it in the office so i cannot give

information on it. But by evening i can i give u information if you can
wait.

Anyway if you have access to spread spectrum communication zeimmer and
peterson they have an table in there with will give generator polynomial and
hence tap points.

I am guessing it u are plannig to use 16 shift registers. or u are talking
about length of m sequecnce.

venu

>From: avraham kurtz <kurtz@beitza.jct.ac.il>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Subject: [ss] dsss pn codes
>Date: Tue, 25 Jul 2000 18:19:15 +0300 (IDT)
>MIME-Version: 1.0
>Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
>MHotMailBB46FB490062D82197B8CC11D91805540; Tue Jul 25 08:20:42 2000
>From bounce-ss-17222@lists.tapr.org Tue Jul 25 08:23:41 2000
>Return-Path: <kurtz@beitza.jct.ac.il>
>Message-ID:
><LYR17222-98419-2000.07.25-10.23.26--venumadhavj#hotmail.com@lists.tapr.org>
>List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
>List-Software: Lyris Server version 3.0
>List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
>List-Owner: <mailto:owner-ss@lists.tapr.org>
>X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
>X-Message-Id:
><Pine.GSU.4.10_heb2.08.10007251816030.10263-100000@beitza.jct.ac.il>
>Sender: bounce-ss-17222@lists.tapr.org
>Precedence: bulk
>
>Hello,
> I plan to use a pn code with 16 bit shift register, I was wondering if
>someone can give me the feedback tap points for a m-length code.
>Thank you
>Avraham Kurtz
>
>
>---
>You are currently subscribed to ss as: venumadhavj@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

45. [ss] ARRL and TAPR 19th Annual Digital Communications Conference

From: "Steven R. Bible" <n7hpr@tapr.org>
Date: Tue, 25 Jul 2000 16:29:58 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-98488-2000.07.25-15.35.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information
Mark your calendar and start making plans to attend the year's premier
event in digital communications. The 19th Annual ARRL and TAPR
Digital Communications Conference will be held September 22-24, 2000,
in Orlando, Florida - just minutes from the Orlando International
Airport.

The ARRL and TAPR Digital Communications Conference is an
international forum for radio amateurs in digital communications,
networking, and related technologies to meet, publish their work, and
present new ideas and techniques for discussion. Presenters and

attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be Lake Monroe Amateur Radio Society (http://www.qsl.net/lmars/),Orange County ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773), and Orlando Amateur Radio Club(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Call for Papers
Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by August 7th, 2000, and should be submitted to

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to

lweinberg@arrl.org

Information on paper submission guidelines are available on-line at

http://www.tapr.org/dcc

Hotel
Conference presentations, meetings, and seminars will be held at the
Orlando Airport Marriott. It is highly recommended that you book your
room prior to arriving. A special DCC room rate of $89/single and
$89/double per night has been blocked for 50 rooms and is available
until September 1st, 2000. Once the 50 rooms have been reserved, room
rates will increase. So be sure to book your rooms early! The hotel
provides transportation to and from the Orlando International Airport.
Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
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There are few activities where your participation can be so much fun
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each other up to date on your latest work -- all this, and more, for
an unforgettable weekend of amateur radio and digital communications.
We hope to see you at the ARRL and TAPR Digital Communications
Conference on September 22-24, 2000!

Full information on the conference and hotel information can be
obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
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You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

46. [ss] ARRL and TAPR 19th Annual Digital Communications Conference

From: "Steven R. Bible" <srbible@gate.net>
Date: Wed, 26 Jul 2000 10:29:58 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-98581-2000.07.26-09.35.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

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Newington, CT 06111

or via the Internet to

   lweinberg@arrl.org

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   http://www.tapr.org/dcc

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Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

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- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
- TAPR Membership Meeting
- An event at which the most important new developments in amateur digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

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Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or Internet: http://www.tapr.org and tapr@tapr.org to register or for additional information.

Conference Registration includes: Conference Proceedings, Sessions, Meetings, and Lunch on Saturday.

See http://www.tapr.org/dcc for an on-line registration form or text form for mailing or faxing.

A registration packet will be mailed in September upon receipt of registration form and payment.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

47. [ss] Re: ss digest: July 24, 2000

From: "Robert A. Buaas" <buaas@wireless.net>
Date: Wed, 26 Jul 2000 09:48:42 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-98591-2000.07.26-11.57.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jim--

> Who, out there, has built a Costas loop?
>
> I am looking for a circuit that I can adapt to an IF at 62.5 MHz.

Have a look at recent issues of EDN Magazine in the "Ideas for Design" section.
While I don't have it at hand, back issues of the magazine are online at their
website. There have been several submissions on making Costas Loops work better.
The articles deal with the baseband portions of the problem, but making the
demodulator is simple compared to getting the loop to work.

best regards/bob K6KGS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

48. [ss] TAPR or other Wireless NIC on PCMCIA to PCI adapter

From: Everett F Batey <efb@cotdazr.org>
Date: Sat, 29 Jul 2000 00:56:46 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: Everett F Batey <efb@cotdazr.org>
Message-ID: <LYR6751-99125-2000.07.29-03.02.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am looking for TAPR or other Wireless NIC on PCMCIA to PCI adapters.
I want to be able to use some 2.3/4GB wireless NIC in my laptop's
PCMCIA slot under Linux, BSD or W.98 as well as use same on any PC
of opportunity with a spare PCI slot ..

Recommendations on card adapter ?

Recommendations on cards if I limited the field ?

How many places to look for drivers for diff cards under Linux or F.BSD ?

TIA / Everett /

--
 + http://www.vhwy.com efb@vhwy.com WA6CRE@arrl.net http://www.cotdazr.org +
 + PocketNet Mail to efbatey@mobile.att.net / Cell/VoiceMail 805 340-6471 +
 + Unix BSD, Sun, HP SCO Linux Security Cisco Routing DataFellows QMail DNS +

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

49. [ss] RE: TAPR or other Wireless NIC on PCMCIA to PCI adapter

From: adesjard@cme.com
Date: Mon, 31 Jul 2000 06:33:29 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99564-2000.07.31-06.39.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Everett,

        Aironet (now Cisco), Lucent, Nokia, and Symbol all sell adapters to do just
what you propose. I do not know if they are interoperable, or only work
with their own cards. Nokia has probably the lowest MSRP, with most bits to
be found under the $100 range for the 11Mb DS stuff.

Alan DesJardins N5VXL
RF Network Engineer

Chicago Mercantile Exchange
Technology Division / Network Operations
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Everett F Batey
Sent: Saturday, July 29, 2000 2:57 AM
To: TAPR Spread Spectrum Special Interest Group
Cc: Everett F Batey
Subject: [ss] TAPR or other Wireless NIC on PCMCIA to PCI adapter

I am looking for TAPR or other Wireless NIC on PCMCIA to PCI adapters.
I want to be able to use some 2.3/4GB wireless NIC in my laptop's
PCMCIA slot under Linux, BSD or W.98 as well as use same on any PC
of opportunity with a spare PCI slot ..

Recommendations on card adapter ?

Recommendations on cards if I limited the field ?

How many places to look for drivers for diff cards under Linux or F.BSD ?

TIA / Everett /

--
 + http://www.vhwy.com efb@vhwy.com WA6CRE@arrl.net http://www.cotdazr.org
+
 + PocketNet Mail to efbatey@mobile.att.net / Cell/VoiceMail 805 340-6471
+
 + Unix BSD, Sun, HP SCO Linux Security Cisco Routing DataFellows QMail DNS
+

You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

50. [ss] Video over Wireless LAN

From: "Marius Hauki" <Marius.Hauki@datarespons.no>
Date: Mon, 31 Jul 2000 14:18:14 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99570-2000.07.31-07.24.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I wonder if anybody on this list has done any testing with
video transmission over Wireless LAN (11Mb CDMA units).

73 de LA9EEA
Marius Hauki

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

51. [ss] Nova Wireless routers and Re: Video over Wireless LAN

From: Chris Arndt <carndt@slonet.org>
Date: Mon, 31 Jul 2000 07:15:15 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99579-2000.07.31-09.21.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Although I haven't done it exclusively on my Cicso Aironet BR340s, it
works, and pretty well. The BRs are my internet connection, so everything,

including my webcams and Axis cams (see below) run over it.

I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
wireless routers. That works pretty well, too, but the Nova units are
slower than 802.11B, up to 1.008 Mb.

www.nova-eng.com

The easiest way I have found to integrate this is with Axis 2100 network
cameras. These are an entire digital camera and Linux server in a camera
housing. They have 10/100 baseT ethernet jacks, serial ports and a
discrete input and output, and run on 12vdc. www.axis.com

On a fast connection, like 802.11B, the Axis cameras can serve up to 10
video streams at up to 10 frames per second. They can be throttled to
whatever speed you need for their connection.

BTW, one of the purposes listed for this list is reviewing current ss
devices. Is anyone interested in hearing more about the NovaRoams?

Chris

On Mon, 31 Jul 2000, Marius Hauki wrote:

> I wonder if anybody on this list has done any testing with
> video transmission over Wireless LAN (11Mb CDMA units).
>
> 73 de LA9EEA
> Marius Hauki
>
>
>
> ---
> You are currently subscribed to ss as: carndt@slonet.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

52. [ss] Re: Nova Wireless routers and Re: Video over Wireless LAN

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Mon, 31 Jul 2000 11:15:09 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99587-2000.07.31-10.20.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Chris Arndt wrote:

> BTW, one of the purposes listed for this list is reviewing current ss
> devices. Is anyone interested in hearing more about the NovaRoams?

I would be interested. I would also be interested in hearing opinions on path
issues. This is something I'm very interested in because I want to run a link
between my house and friends. We are 1.1 mi. apart with no earth obstructions
but we are both significantly overshadowed by trees. I would have to guess
that approximately 30 percent of the path would be through trees. Towers are
not an option given that these are hundred foot pines.

My current level of understanding leads me to believe that 2.4 GHz won't make
it but 900 MHz might. I would be really interested in hearing if there are
simple/cheap ways of testing out paths for situations like this.

---eric

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

53. [ss] Re: Nova Wireless routers and Re: Video over Wireless LAN

From: John Hansen <john@hansen.net>
Date: Mon, 31 Jul 2000 12:11:27 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>

Message-ID: <LYR6751-99612-2000.07.31-11.15.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:15 AM 7/31/00 -0700, you wrote:
>I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
>wireless routers. That works pretty well, too, but the Nova units are
>slower than 802.11B, up to 1.008 Mb.
>
>www.nova-eng.com

Interesting web pages. Who sells these and what do they cost?

John W2FS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

54. [ss] Re: Nova Wireless routers and Re: Video over Wireless LAN

From: Chris Arndt <carndt@slonet.org>
Date: Mon, 31 Jul 2000 09:23:28 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99615-2000.07.31-11.30.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I became a VAR for Nova to buy the 3 I have, so I can resell them. They
list for about $1900, but I can discount that some, especially for
amateurs or in quantities.

They come with a 12v power supply, and Nova sells type accepted mag mount,
omni and Yagi base antennas, and a rubber duck. Also mobile mounting
brackets, and 12vdc power cords with lighter plugs. The units have a
reverse TNC antenna connection, RJ45 network jack and a serial port for
programming.

The serial port can also be routed separately from the ethernet, to create
a wireless serial connection.

Each unit can be set up to repeat, also.

Chris

On Mon, 31 Jul 2000, John Hansen wrote:

> At 07:15 AM 7/31/00 -0700, you wrote:
> >I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
> >wireless routers. That works pretty well, too, but the Nova units are
> >slower than 802.11B, up to 1.008 Mb.
> >
> >www.nova-eng.com
>
> Interesting web pages. Who sells these and what do they cost?
>
> John W2FS
>
>
> ---
> You are currently subscribed to ss as: carndt@slonet.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

August 2000

Original source file: ss.0008
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0008

1. [ss] Re: Nova Wireless routers and Re: Video over Wireless LAN

From: Chris Arndt <carndt@slonet.org>
Date: Mon, 31 Jul 2000 22:06:12 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99734-2000.08.01-00.11.42--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I posted a little info on the Novas as a reply to another post. I'm working on getting a web page up with more real world info than the Nova website.

I've been running my internet connection over some Cisco Aironet wireless bridges (2 hops) for a couple of months now, and playing with the Novas off and on.

Your feelings about 2.4 ghz vs 900 mhz are pretty accurate, especially if you are looking at direct sequence. I did an informal 2.4 drive by test along a road perpendicular to the 2 mile long test path that allowed me to go from line of sight to one up to several lines of trees. It doesn't take much to wipe out 2.4. That's why I need 2 hops for my connection.

The Novas can run up to 800 mw, and have 7 selectable bit rates over 2 different modulation methods. The lower you go in speed the more range you have.

I'm not sure how easily/cheaply you could test the path without using a pair of Novas, especially to get results comparable to the Novas with low loss cable and gain antennas. An Engenius long range cordless uses the same band and power (I think), and can have an outdoor antenna on the base, but you'd still be stuck with the "long range" flex antenna on the handset. I have used my Engenius out to the same LOS location from which I have tested the Novas, 4.7 miles from home, which is on a hill.

Maybe you could borrow a pair of 800 mhz SMR handhelds and use talk around. We have to approximate the ERP from those and compare it to the Nova ERP.

Or see how far you can hear the mobile side of an analog cell phone on an old scanner. ;-)

What kind of speed can you live with? There's another product made by Wireless Mountain, the Power Rover, that is serial, 115 kbaud (I think) and a ffreq hopper, so it should have better punch.
www.wirelessmountain.com

I'm gonna get a pair of these to play with soon, and I'll have more info then.

Chris

On Mon, 31 Jul 2000, Eric S. Johansson wrote:

>
>
> Chris Arndt wrote:
>
> > BTW, one of the purposes listed for this list is reviewing current ss
> > devices. Is anyone interested in hearing more about the NovaRoams?
>
> I would be interested. I would also be interested in hearing opinions on path
> issues. This is something I'm very interested in because I want to run a link
> between my house and friends. We are 1.1 mi. apart with no earth obstructions
> but we are both significantly overshadowed by trees. I would have to guess
> that approximately 30 percent of the path would be through trees. Towers are
> not an option given that these are hundred foot pines.
>
> My current level of understanding leads me to believe that 2.4 GHz won't make
> it but 900 MHz might. I would be really interested in hearing if there are
> simple/cheap ways of testing out paths for situations like this.
>
> ---eric
>
>

>
> ---
> You are currently subscribed to ss as: carndt@slonet.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] TAPR FHSS radio project

From: "Fred" <fredmp@megsinet.net>
Date: Tue, 1 Aug 2000 06:17:09 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99795-2000.08.01-05.23.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Check out the update on the FHSS radio project on the TAPR page.
Progress is being made.

Fred

KE8TQ
Hams Do It With High Frequency in Dayton Ohio and around the world

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: ss digest: July 31, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Tue, 1 Aug 2000 22:42:01 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-99943-2000.08.01-21.46.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Regarding propagation losses at 2.4 GHz & 900 MHz:

Space loss goes up by 6 dB every time frequency is doubled. That is the
first part.

Higher frequencies suffer more multipath and foilage loss at higher
frequencies. There is not too much theory here (at least not published).
Unfortunately, almost everyting I've found discusses penetration in,
through, and around buildings. This is where the research $$ is.

My experience tells me that multipath from foilage is stronger that
attenuation thru
foilage at 2.4 GHz. This is based on range observation (about 6 mile
range) between a 12 foot transmit antenna and 24 foot Cassegrain antenna.
Both antennas were on 800 ft+ hills above countryside. Frequency is 2.7
to 2.8 GHz.

During strong winds in the valley, measurements using this range yielded
strong nuls and 5.8 dB increases above average signal levels.

Bell Labs has made actual building measurements, but mostly around 900 MHz.
Results are available in IEEE Trans on Ant & prop, as well as Ant & Prop
Mag. Look back between 5 and 15 years ago.

There was a very good article in Ant & Prop Mag last year. Most likely,
the April or May issue. Ant. & Prop Mag. is a monthly newsletter
published by the IEEE Ant. & Prop Society. Available at most EE college
libraries. This article dealt with proapgation thru walls, floors, etc.

Lastly, I remember an article of prop at 50 MHz through jungle foilage in
India. Somewhere in Radio Science, about 10 years ago.

JIm Ussailis W1EQO / VE1EQO

On Tue, 1 Aug 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Monday, July 31, 2000.
>
> 1. RE: TAPR or other Wireless NIC on PCMCIA to PCI adapter
> 2. Video over Wireless LAN
> 3. Nova Wireless routers and Re: Video over Wireless LAN
> 4. Re: Nova Wireless routers and Re: Video over Wireless LAN
> 5. Re: Nova Wireless routers and Re: Video over Wireless LAN
> 6. Re: Nova Wireless routers and Re: Video over Wireless LAN
>
> --
>
> Subject: RE: TAPR or other Wireless NIC on PCMCIA to PCI adapter
> From: adesjard@cme.com
> Date: Mon, 31 Jul 2000 06:33:29 -0500
> X-Message-Number: 1
>
> Everett,
>
>   Aironet (now Cisco), Lucent, Nokia, and Symbol all sell adapters to do just
> what you propose. I do not know if they are interoperable, or only work
> with their own cards. Nokia has probably the lowest MSRP, with most bits to
> be found under the $100 range for the 11Mb DS stuff.
>
> Alan DesJardins N5VXL
> RF Network Engineer
> Chicago Mercantile Exchange
> Technology Division / Network Operations
> 30 S. Wacker Drive
> Chicago, IL 60606
> 312-338-2853
> adesjard@cme.com
>
>
> -----Original Message-----
> From: bounce-ss-12965@lists.tapr.org
> [mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Everett F Batey
> Sent: Saturday, July 29, 2000 2:57 AM
> To: TAPR Spread Spectrum Special Interest Group
> Cc: Everett F Batey
> Subject: [ss] TAPR or other Wireless NIC on PCMCIA to PCI adapter
>
>
>
> I am looking for TAPR or other Wireless NIC on PCMCIA to PCI adapters.
> I want to be able to use some 2.3/4GB wireless NIC in my laptop's
> PCMCIA slot under Linux, BSD or W.98 as well as use same on any PC
> of opportunity with a spare PCI slot ..
>
> Recommendations on card adapter ?
>
> Recommendations on cards if I limited the field ?
>
> How many places to look for drivers for diff cards under Linux or F.BSD ?
>
> TIA / Everett /
>
>
> --
> + http://www.vhwy.com efb@vhwy.com WA6CRE@arrl.net http://www.cotdazr.org
> +
> + PocketNet Mail to efbatey@mobile.att.net / Cell/VoiceMail 805 340-6471
> +
> + Unix BSD, Sun, HP SCO Linux Security Cisco Routing DataFellows QMail DNS
> +
>
>
> ---
> You are currently subscribed to ss as: adesjard@cme.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
> --
>
> Subject: Video over Wireless LAN
> From: "Marius Hauki" <Marius.Hauki@datarespons.no>
> Date: Mon, 31 Jul 2000 14:18:14 +0200
> X-Message-Number: 2

> I wonder if anybody on this list has done any testing with
> video transmission over Wireless LAN (11Mb CDMA units).
>
> 73 de LA9EEA
> Marius Hauki
>
>
>
> ---
>
> Subject: Nova Wireless routers and Re: Video over Wireless LAN
> From: Chris Arndt <carndt@slonet.org>
> Date: Mon, 31 Jul 2000 07:15:15 -0700 (PDT)
> X-Message-Number: 3
>
> Although I haven't done it exclusively on my Cicso Aironet BR340s, it
> works, and pretty well. The BRs are my internet connection, so everything,
> including my webcams and Axis cams (see below) run over it.
>
> I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
> wireless routers. That works pretty well, too, but the Nova units are
> slower than 802.11B, up to 1.008 Mb.
>
> www.nova-eng.com
>
> The easiest way I have found to integrate this is with Axis 2100 network
> cameras. These are an entire digital camera and Linux server in a camera
> housing. They have 10/100 baseT ethernet jacks, serial ports and a
> discrete input and output, and run on 12vdc. www.axis.com
>
> On a fast connection, like 802.11B, the Axis cameras can serve up to 10
> video streams at up to 10 frames per second. They can be throttled to
> whatever speed you need for their connection.
>
> BTW, one of the purposes listed for this list is reviewing current ss
> devices. Is anyone interested in hearing more about the NovaRoams?
>
> Chris
>
> On Mon, 31 Jul 2000, Marius Hauki wrote:
>
> > I wonder if anybody on this list has done any testing with
> > video transmission over Wireless LAN (11Mb CDMA units).
> >
> > 73 de LA9EEA
> > Marius Hauki
> >
> >
> >
> > ---
> > You are currently subscribed to ss as: carndt@slonet.org
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>
> ---
>
> Subject: Re: Nova Wireless routers and Re: Video over Wireless LAN
> From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
> Date: Mon, 31 Jul 2000 11:15:09 -0400
> X-Message-Number: 4
>
>
>
> Chris Arndt wrote:
>
> > BTW, one of the purposes listed for this list is reviewing current ss
> > devices. Is anyone interested in hearing more about the NovaRoams?
>
> I would be interested. I would also be interested in hearing opinions on path
> issues. This is something I'm very interested in because I want to run a link
> between my house and friends. We are 1.1 mi. apart with no earth obstructions
> but we are both significantly overshadowed by trees. I would have to guess
> that approximately 30 percent of the path would be through trees. Towers are
> not an option given that these are hundred foot pines.
>
> My current level of understanding leads me to believe that 2.4 GHz won't make

> it but 900 MHz might. I would be really interested in hearing if there are
> simple/cheap ways of testing out paths for situations like this.
>
> ---eric
>
>
>
> --
>
> Subject: Re: Nova Wireless routers and Re: Video over Wireless LAN
> From: John Hansen <john@hansen.net>
> Date: Mon, 31 Jul 2000 12:11:27 -0400
> X-Message-Number: 5
>
> At 07:15 AM 7/31/00 -0700, you wrote:
> >I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
> >wireless routers. That works pretty well, too, but the Nova units are
> >slower than 802.11B, up to 1.008 Mb.
> >
> >www.nova-eng.com
>
> Interesting web pages. Who sells these and what do they cost?
>
> John W2FS
>
>
> --
>
> Subject: Re: Nova Wireless routers and Re: Video over Wireless LAN
> From: Chris Arndt <carndt@slonet.org>
> Date: Mon, 31 Jul 2000 09:23:28 -0700 (PDT)
> X-Message-Number: 6
>
> I became a VAR for Nova to buy the 3 I have, so I can resell them. They
> list for about $1900, but I can discount that some, especially for
> amateurs or in quantities.
>
> They come with a 12v power supply, and Nova sells type accepted mag mount,
> omni and Yagi base antennas, and a rubber duck. Also mobile mounting
> brackets, and 12vdc power cords with lighter plugs. The units have a
> reverse TNC antenna connection, RJ45 network jack and a serial port for
> programming.
>
> The serial port can also be routed separately from the ethernet, to create
> a wireless serial connection.
>
> Each unit can be set up to repeat, also.
>
> Chris
>
> On Mon, 31 Jul 2000, John Hansen wrote:
>
> > At 07:15 AM 7/31/00 -0700, you wrote:
> > >I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
> > >wireless routers. That works pretty well, too, but the Nova units are
> > >slower than 802.11B, up to 1.008 Mb.
> > >
> > >www.nova-eng.com
> >
> > Interesting web pages. Who sells these and what do they cost?
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> > John W2FS
> >
> >
> > ---
> > You are currently subscribed to ss as: carndt@slonet.org
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com

> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: ss digest: July 31, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Tue, 1 Aug 2000 22:49:45 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-99944-2000.08.01-21.54.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Has anyone attempted DS-SS television yet??

Jim Ussailis W1EQO / VE1EQO

ussailis@shaysnet.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] Voice over IP

From: Catalin Enescu <cenescu@datek.ro>
Date: Wed, 02 Aug 2000 11:34:02 +0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-99980-2000.08.02-03.59.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I wonder if anybody has done any testing with VoIP equipments over
Wireless LAN (11 MB units).

Catalin Enescu

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: ss digest: July 31, 2000

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Wed, 2 Aug 2000 08:46:46 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "ss digest recipients" <ss@lists.tapr.org>
Message-ID: <LYR6751-100005-2000.08.02-07.54.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Actual practice does NOT support this! We have had 900 MHz and currently -
only - 2.4 GHz SS transceivers. Actual range tests also DO NOT support
this! It would not make any sense for us to discontinue product that works
better for a product line that is inferior!

2.4 GHz does present some interesting multi-path problems but with a proper
site survey, sometime, multipath can be brought into play and actually
improve the reliability of communications. This is not as easily
accomplished with 900 MHz.

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
One Meca Way
Norcross, GA 30093, USA
Pho: 770.564.5540, Ext. 2342
Fax: 770.564.5541
Cellular Phone: 678.429.2124
OEM E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com
SSuRFnet E-mail: k4bet@ssurfnet.com
http://www.ssurfnet.com

Visit with us at ISA Expo 2000!
Booth 1843
21 - 24 August, 2000
New Orleans, LA USA

http://www.isa.org/events/
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
New address (bigger and much nicer);
Effective 14 August 2000:

Digital Wireless Corporation
5375 Oakbrook Parkway
Norcross, GA 30093 USA
Pho: 678.684.2000
Fax: 678.684.2001

----- Original Message -----
From: "Jim Ussailis" <ussailis@equinox.shaysnet.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "ss digest recipients" <ss@lists.tapr.org>
Sent: Tuesday, August 01, 2000 10:42 PM
Subject: [ss] Re: ss digest: July 31, 2000

: Regarding propagation losses at 2.4 GHz & 900 MHz:
:
: Space loss goes up by 6 dB every time frequency is doubled. That is the
: first part.
:
: Higher frequencies suffer more multipath and foilage loss at higher
: frequencies. There is not too much theory here (at least not published).
: Unfortunately, almost everyting I've found discusses penetration in,
: through, and around buildings. This is where the research $$ is.
:
: My experience tells me that multipath from foilage is stronger that
: attenuation thru
: foilage at 2.4 GHz. This is based on range observation (about 6 mile
: range) between a 12 foot transmit antenna and 24 foot Cassegrain antenna.
: Both antennas were on 800 ft+ hills above countryside. Frequency is 2.7
: to 2.8 GHz.
:
: During strong winds in the valley, measurements using this range yielded
: strong nuls and 5.8 dB increases above average signal levels.
:
: Bell Labs has made actual building measurements, but mostly around 900
MHz.
: Results are available in IEEE Trans on Ant & prop, as well as Ant & Prop
: Mag. Look back between 5 and 15 years ago.
:
: There was a very good article in Ant & Prop Mag last year. Most likely,
: the April or May issue. Ant. & Prop Mag. is a monthly newsletter
: published by the IEEE Ant. & Prop Society. Available at most EE college
: libraries. This article dealt with proapgation thru walls, floors, etc.
:
: Lastly, I remember an article of prop at 50 MHz through jungle foilage in
: India. Somewhere in Radio Science, about 10 years ago.
:
:
: JIm Ussailis W1EQO / VE1EQO
:
:
: On Tue, 1 Aug 2000, TAPR Spread Spectrum Special Interest Group digest
wrote:
:
: > TAPR Spread Spectrum Special Interest Group Digest for Monday, July 31,
2000.
: >
: > 1. RE: TAPR or other Wireless NIC on PCMCIA to PCI adapter
: > 2. Video over Wireless LAN
: > 3. Nova Wireless routers and Re: Video over Wireless LAN
: > 4. Re: Nova Wireless routers and Re: Video over Wireless LAN
: > 5. Re: Nova Wireless routers and Re: Video over Wireless LAN
: > 6. Re: Nova Wireless routers and Re: Video over Wireless LAN
: >
: > --
: >
: > Subject: RE: TAPR or other Wireless NIC on PCMCIA to PCI adapter
: > From: adesjard@cme.com
: > Date: Mon, 31 Jul 2000 06:33:29 -0500
: > X-Message-Number: 1
: >
: > Everett,
: >
: > Aironet (now Cisco), Lucent, Nokia, and Symbol all sell adapters to do
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

just
: > what you propose. I do not know if they are interoperable, or only work
: > with their own cards. Nokia has probably the lowest MSRP, with most
bits to
: > be found under the $100 range for the 11Mb DS stuff.
: >
: > Alan DesJardins N5VXL
: > RF Network Engineer
: > Chicago Mercantile Exchange
: > Technology Division / Network Operations
: > 30 S. Wacker Drive
: > Chicago, IL 60606
: > 312-338-2853
: > adesjard@cme.com
: >
: >
: > -----Original Message-----
: > From: bounce-ss-12965@lists.tapr.org
: > [mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of Everett F Batey
: > Sent: Saturday, July 29, 2000 2:57 AM
: > To: TAPR Spread Spectrum Special Interest Group
: > Cc: Everett F Batey
: > Subject: [ss] TAPR or other Wireless NIC on PCMCIA to PCI adapter
: >
: >
: >
: > I am looking for TAPR or other Wireless NIC on PCMCIA to PCI adapters.
: > I want to be able to use some 2.3/4GB wireless NIC in my laptop's
: > PCMCIA slot under Linux, BSD or W.98 as well as use same on any PC
: > of opportunity with a spare PCI slot ..
: >
: > Recommendations on card adapter ?
: >
: > Recommendations on cards if I limited the field ?
: >
: > How many places to look for drivers for diff cards under Linux or F.BSD
?
: >
: > TIA / Everett /
: >
: >
: > --
: > + http://www.vhwy.com efb@vhwy.com WA6CRE@arrl.net
http://www.cotdazr.org
: > +
: > + PocketNet Mail to efbatey@mobile.att.net / Cell/VoiceMail 805
340-6471
: > +
: > + Unix BSD, Sun, HP SCO Linux Security Cisco Routing DataFellows QMail
DNS
: > +
: >
: >
: > ---
: > You are currently subscribed to ss as: adesjard@cme.com
: > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >
: >
: > --
: >
: > Subject: Video over Wireless LAN
: > From: "Marius Hauki" <Marius.Hauki@datarespons.no>
: > Date: Mon, 31 Jul 2000 14:18:14 +0200
: > X-Message-Number: 2
: >
: > I wonder if anybody on this list has done any testing with
: > video transmission over Wireless LAN (11Mb CDMA units).
: >
: > 73 de LA9EEA
: > Marius Hauki
: >
: >
: >
: > --
: >
: > Subject: Nova Wireless routers and Re: Video over Wireless LAN
: > From: Chris Arndt <carndt@slonet.org>
: > Date: Mon, 31 Jul 2000 07:15:15 -0700 (PDT)

: > X-Message-Number: 3
: >
: > Although I haven't done it exclusively on my Cicso Aironet BR340s, it
: > works, and pretty well. The BRs are my internet connection, so
everything,
: > including my webcams and Axis cams (see below) run over it.
: >
: > I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
: > wireless routers. That works pretty well, too, but the Nova units are
: > slower than 802.11B, up to 1.008 Mb.
: >
: > www.nova-eng.com
: >
: > The easiest way I have found to integrate this is with Axis 2100 network
: > cameras. These are an entire digital camera and Linux server in a camera
: > housing. They have 10/100 baseT ethernet jacks, serial ports and a
: > discrete input and output, and run on 12vdc. www.axis.com
: >
: > On a fast connection, like 802.11B, the Axis cameras can serve up to 10
: > video streams at up to 10 frames per second. They can be throttled to
: > whatever speed you need for their connection.
: >
: > BTW, one of the purposes listed for this list is reviewing current ss
: > devices. Is anyone interested in hearing more about the NovaRoams?
: >
: > Chris
: >
: > On Mon, 31 Jul 2000, Marius Hauki wrote:
: >
: > > I wonder if anybody on this list has done any testing with
: > > video transmission over Wireless LAN (11Mb CDMA units).
: > >
: > > 73 de LA9EEA
: > > Marius Hauki
: > >
: > >
: > >
: > > ---
: > > You are currently subscribed to ss as: carndt@slonet.org
: > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > >
: > >
: >
: >
: > --
: >
: > Subject: Re: Nova Wireless routers and Re: Video over Wireless LAN
: > From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
: > Date: Mon, 31 Jul 2000 11:15:09 -0400
: > X-Message-Number: 4
: >
: >
: >
: > Chris Arndt wrote:
: >
: > > BTW, one of the purposes listed for this list is reviewing current ss
: > > devices. Is anyone interested in hearing more about the NovaRoams?
: >
: > I would be interested. I would also be interested in hearing opinions
on path
: > issues. This is something I'm very interested in because I want to run
a link
: > between my house and friends. We are 1.1 mi. apart with no earth
obstructions
: > but we are both significantly overshadowed by trees. I would have to
guess
: > that approximately 30 percent of the path would be through trees.
Towers are
: > not an option given that these are hundred foot pines.
: >
: > My current level of understanding leads me to believe that 2.4 GHz won't
make
: > it but 900 MHz might. I would be really interested in hearing if there
are
: > simple/cheap ways of testing out paths for situations like this.
: >
: > ---eric
: >
: >

: >
: > --
: >
: > Subject: Re: Nova Wireless routers and Re: Video over Wireless LAN
: > From: John Hansen <john@hansen.net>
: > Date: Mon, 31 Jul 2000 12:11:27 -0400
: > X-Message-Number: 5
: >
: > At 07:15 AM 7/31/00 -0700, you wrote:
: > >I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz DSSS
: > >wireless routers. That works pretty well, too, but the Nova units are
: > >slower than 802.11B, up to 1.008 Mb.
: > >
: > >www.nova-eng.com
: >
: > Interesting web pages. Who sells these and what do they cost?
: >
: > John W2FS
: >
: >
: > --
: >
: > Subject: Re: Nova Wireless routers and Re: Video over Wireless LAN
: > From: Chris Arndt <carndt@slonet.org>
: > Date: Mon, 31 Jul 2000 09:23:28 -0700 (PDT)
: > X-Message-Number: 6
: >
: > I became a VAR for Nova to buy the 3 I have, so I can resell them. They
: > list for about $1900, but I can discount that some, especially for
: > amateurs or in quantities.
: >
: > They come with a 12v power supply, and Nova sells type accepted mag
mount,
: > omni and Yagi base antennas, and a rubber duck. Also mobile mounting
: > brackets, and 12vdc power cords with lighter plugs. The units have a
: > reverse TNC antenna connection, RJ45 network jack and a serial port for
: > programming.
: >
: > The serial port can also be routed separately from the ethernet, to
create
: > a wireless serial connection.
: >
: > Each unit can be set up to repeat, also.
: >
: > Chris
: >
: > On Mon, 31 Jul 2000, John Hansen wrote:
: >
: > > At 07:15 AM 7/31/00 -0700, you wrote:
: > > >I have done _mobile_ video with Nova Engineering NovaRoam 900 mhz
DSSS
: > > >wireless routers. That works pretty well, too, but the Nova units are
: > > >slower than 802.11B, up to 1.008 Mb.
: > > >
: > > >www.nova-eng.com
: > >
: > > Interesting web pages. Who sells these and what do they cost?
: > >
: > > John W2FS
: > >
: > >
: > > ---
: > > You are currently subscribed to ss as: carndt@slonet.org
: > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: > >
: > >
: >
: >
: >
: >
: > ---
: >
: > END OF DIGEST
: >
: > ---
: > You are currently subscribed to ss as: ussailis@shaysnet.com
: > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: >

:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: 900 vs. 2.4

From: Ron Schroeder <rjs@bnl.gov>
Date: Wed, 02 Aug 2000 10:27:49 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-100022-2000.08.02-09.33.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 08:46 AM 8/2/00 -0400, you wrote:
>Actual practice does NOT support this! We have had 900 MHz and currently -
>only - 2.4 GHz SS transceivers. Actual range tests also DO NOT support
>this! It would not make any sense for us to discontinue product that works
>better for a product line that is inferior!
>
>2.4 GHz does present some interesting multi-path problems but with a proper
>site survey, sometime, multipath can be brought into play and actually
>improve the reliability of communications. This is not as easily
>accomplished with 900 MHz.
>
>Paul McInnish - K4BET
>Manager, Business Development
>Digital Wireless Corp.

Hi Paul,

My experience with the Panasonic 2.4G/900MHz SS cordless phones shows the
900MHz link to be much more robust than the 2.4GHz link. Would this be due
to TX power and RX sensitivity or to propagation?

Thanks,

Ron WD8CDH

Ron Schroeder
WD8CDH
E. E. S.
wd8cdh@bnl.gov
rjs@bnl.gov
ron@112motors.com
631 344-4561 Day
631 286-5677 Nite
*note change of area code to 631 from 516

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] Re: 900 vs. 2.4

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Wed, 2 Aug 2000 10:46:07 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-100032-2000.08.02-09.54.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ron:

Partially all those items mentioned... but goes way beyond those you
mentioned... band pass skirts, soft & hard filtering, DSP, noise figures of
receiver, noise floor, etc., etc. Overhead capabilities, error correction
capabilities.

As an example... our I/O port speed for our basic module is 230.4kbps....
the over the air data rate is 460.8kbps. This additional over-head
bandwidth is where all the radio "house keeping" chores are performed...
registration, synchronization, error correction, header transmission, etc.,
etc.

Takes some fairly sophisticated firmware to control and utilize all of
this.... but... what can I say? Our intellectual property is not so much
the hardware (some uniqueness there also) but the 13 years of development of
the embedded firmware that makes the radio "arc, spark, smoke & go" (hi hi).

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.

----- Original Message -----
From: "Ron Schroeder" <rjs@bnl.gov>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Wednesday, August 02, 2000 10:27 AM
Subject: [ss] Re: 900 vs. 2.4

: At 08:46 AM 8/2/00 -0400, you wrote:
: >Actual practice does NOT support this! We have had 900 MHz and
currently -
: >only - 2.4 GHz SS transceivers. Actual range tests also DO NOT support
: >this! It would not make any sense for us to discontinue product that
works
: >better for a product line that is inferior!
: >
: >2.4 GHz does present some interesting multi-path problems but with a
proper
: >site survey, sometime, multipath can be brought into play and actually
: >improve the reliability of communications. This is not as easily
: >accomplished with 900 MHz.
: >
: >Paul McInnish - K4BET
: >Manager, Business Development
: >Digital Wireless Corp.
:
: Hi Paul,
:
: My experience with the Panasonic 2.4G/900MHz SS cordless phones shows the
: 900MHz link to be much more robust than the 2.4GHz link. Would this be
due
: to TX power and RX sensitivity or to propagation?
:
: Thanks,
:
: Ron WD8CDH
: --
: Ron Schroeder
: WD8CDH
: E. E. S.
: wd8cdh@bnl.gov
: rjs@bnl.gov
: ron@112motors.com
: 631 344-4561 Day
: 631 286-5677 Nite
: *note change of area code to 631 from 516
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Re: ss digest: August 01, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-100124-2000.08.02-20.44.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

A comment on data rate & sensitivity / range.

The trick to getting a very good range (for a fixed transmitter power) on a
data system is to reduce the receiver bandwidth. The sensitivity changes
by 10 Log (new bandwidth / previous bandwidth). Of course reducing
the bandwidth reduces the data rate. Nothing free.

The problem with this is that for many systems reducing the data rate
does not reduce the receiver bandwidth. That is generally fixed by the IF
or video filters. Unless adaptive filters are employed.

Does anyone out there know where I can find a schematic for a Costas loop
detector? Sure would be a BIG help.

---W1EQO

ussailis@shaysnet.com

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Re: ss digest: August 01, 2000

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Wed, 2 Aug 2000 18:47:34 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-100126-2000.08.02-20.54.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Does anyone out there know where I can find a schematic for a Costas loop
>detector? Sure would be a BIG help.

Try this link...

        http://www.hamradio.si/psk23cm.html

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: ss digest: August 01, 2000

From: "venumadhav josyula" <venumadhavj@hotmail.com>
Date: Thu, 03 Aug 2000 11:52:42 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-100203-2000.08.03-06.58.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello jim,

In what context are u talking. What for high date services, where u would
not want to reduce your data rate. Are there any other ways to improve
sensitivity/range. I am talking in sense to HDR services proposed by
QUALCOMM. Generally speaking, about variable data rates SS
system.

thanking you
yours sincerely
venu

>From: Jim Ussailis <ussailis@equinox.shaysnet.com>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>CC: ss digest recipients <ss@lists.tapr.org>
>Subject: [ss] Re: ss digest: August 01, 2000
>Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
>MIME-Version: 1.0
>Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
>MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02 18:40:41 2000
>From bounce-ss-17222@lists.tapr.org Wed Aug 02 18:45:28 2000
>Return-Path: <ussailis@equinox.shaysnet.com>
>In-Reply-To:
><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>

>Message-ID:
><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.org>
>List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
>List-Software: Lyris Server version 3.0
>List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
>List-Owner: <mailto:owner-ss@lists.tapr.org>
>X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
>X-Message-Id: <Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
>Sender: bounce-ss-17222@lists.tapr.org
>Precedence: bulk
>
>A comment on data rate & sensitivity / range.
>
>The trick to getting a very good range (for a fixed transmitter power) on a
>data system is to reduce the receiver bandwidth. The sensitivity changes
>by 10 Log (new bandwidth / previous bandwidth). Of course reducing
>the bandwidth reduces the data rate. Nothing free.
>
>The problem with this is that for many systems reducing the data rate
>does not reduce the receiver bandwidth. That is generally fixed by the IF
>or video filters. Unless adaptive filters are employed.
>
>---
>
>Does anyone out there know where I can find a schematic for a Costas loop
>detector? Sure would be a BIG help.
>
>
>---W1EQO
>
>ussailis@shaysnet.com
>
>
>---
>You are currently subscribed to ss as: venumadhavj@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: ss digest: August 03, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-100690-2000.08.04-21.32.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, that's the problem. Everybody wants a faster data rate. If
everything else is a constant, range must suffer, or one must transmit
more info/bit.

The info/bit stuff is covered by Shannon. There is a maximum that he
provides, then there is a lessor maximum given real hardware (as opposed
to theoretical hardware).

So, my point is, unless you want a slower data rate, you must increase
power to get more range. There is no free lunch!

Jim, W1EQO

On Fri, 4 Aug 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Thursday, August 03, 2000.
>
> 1. Re: ss digest: August 01, 2000
>
> --
>
> Subject: Re: ss digest: August 01, 2000
> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> Date: Thu, 03 Aug 2000 11:52:42 GMT

> X-Message-Number: 1
>
> Hello jim,
>
> In what context are u talking. What for high date services, where u would
> not want to reduce your data rate. Are there any other ways to improve
> sensitivity/range. I am talking in sense to HDR services proposed by
> QUALCOMM. Generally speaking, about variable data rates SS
> system.
>
> thanking you
> yours sincerely
> venu
>
>
>
> >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> >Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >CC: ss digest recipients <ss@lists.tapr.org>
> >Subject: [ss] Re: ss digest: August 01, 2000
> >Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
> >MIME-Version: 1.0
> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> >MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02 18:40:41 2000
> >From bounce-ss-17222@lists.tapr.org Wed Aug 02 18:45:28 2000
> >Return-Path: <ussailis@equinox.shaysnet.com>
> >In-Reply-To:
> ><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>
> >Message-ID:
> ><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.org>
> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> >List-Software: Lyris Server version 3.0
> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> >List-Owner: <mailto:owner-ss@lists.tapr.org>
> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> >X-Message-Id: <Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> >Sender: bounce-ss-17222@lists.tapr.org
> >Precedence: bulk
> >
> >A comment on data rate & sensitivity / range.
> >
> >The trick to getting a very good range (for a fixed transmitter power) on a
> >data system is to reduce the receiver bandwidth. The sensitivity changes
> >by 10 Log (new bandwidth / previous bandwidth). Of course reducing
> >the bandwidth reduces the data rate. Nothing free.
> >
> >The problem with this is that for many systems reducing the data rate
> >does not reduce the receiver bandwidth. That is generally fixed by the IF
> >or video filters. Unless adaptive filters are employed.
> >
> >---
> >
> >Does anyone out there know where I can find a schematic for a Costas loop
> >detector? Sure would be a BIG help.
> >
> >
> >---W1EQO
> >
> >ussailis@shaysnet.com
> >
> >
> >---
> >You are currently subscribed to ss as: venumadhavj@hotmail.com
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
>
> _____
> Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com

> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: ss digest: August 03, 2000

From: "venumadhav josyula" <venumadhavj@hotmail.com>
Date: Sat, 05 Aug 2000 03:35:51 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-100704-2000.08.04-22.41.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

But whole issue for wireles service providers is provide multimedia services
through ur network nad integrate with the present ip/atm networks. So in
order to provide those
you will require varying data rates and depending upon the application. That
needs to be provided. Plus services require raonably good range and your
devices need to be more capable.

I agree with you about dependability of capacity on shannon's theorem, but
my question is'nt it possible to maintain high date rate using multicarrier
modulation scheme such as OFDM, and provide reasonably good coding schemes
to improve the range. Thus making system less sensitive to frequency errors.

Because as your data rate (but this HDR is only possible with some kind of
MC* scheme) is increased, your system becomes more sentive to frequency
errors and hence provision needs to be made to combat those.

Sir I am asking this because, I doing and reearch dessertation on this topic
since I am an student.

cheers
venu

* MULTI-CARRIER.
>From: Jim Ussailis <ussailis@equinox.shaysnet.com>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>CC: ss digest recipients <ss@lists.tapr.org>
>Subject: [ss] Re: ss digest: August 03, 2000
>Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
>MIME-Version: 1.0
>Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
>MHotMailBB54C6A90031D82197EBCC11D9180CF30; Fri Aug 04 19:27:54 2000
>From bounce-ss-17222@lists.tapr.org Fri Aug 04 19:29:33 2000
>Return-Path: <ussailis@equinox.shaysnet.com>
>In-Reply-To:
><LYR16486-100466-2000.08.04-00.01.21--ussailis#shaysnet.com@lists.tapr.org>
>Message-ID:
><LYR17222-100690-2000.08.04-21.32.13--venumadhavj#hotmail.com@lists.tapr.org>
>List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
>List-Software: Lyris Server version 3.0
>List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
>List-Owner: <mailto:owner-ss@lists.tapr.org>
>X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
>X-Message-Id: <Pine.3.89.10008042219.A17693-0100000@equinox.shaysnet.com>
>Sender: bounce-ss-17222@lists.tapr.org
>Precedence: bulk
>
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>to theoretical hardware).
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>So, my point is, unless you want a slower data rate, you must increase
>power to get more range. There is no free lunch!
>
>Jim, W1EQO
>
>
>On Fri, 4 Aug 2000, TAPR Spread Spectrum Special Interest Group digest
>wrote:
>

> > TAPR Spread Spectrum Special Interest Group Digest for Thursday, August
>03, 2000.
> >
> > 1. Re: ss digest: August 01, 2000
> >
> > --
> >
> > Subject: Re: ss digest: August 01, 2000
> > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> > Date: Thu, 03 Aug 2000 11:52:42 GMT
> > X-Message-Number: 1
> >
> > Hello jim,
> >
> > In what context are u talking. What for high date services, where u
>would
> > not want to reduce your data rate. Are there any other ways to improve
> > sensitivity/range. I am talking in sense to HDR services proposed by
> > QUALCOMM. Generally speaking, about variable data rates SS
> > system.
> >
> > thanking you
> > yours sincerely
> > venu
> >
> >
> >
> > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
><ss@lists.tapr.org>
> > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > >CC: ss digest recipients <ss@lists.tapr.org>
> > >Subject: [ss] Re: ss digest: August 01, 2000
> > >Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
> > >MIME-Version: 1.0
> > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > >MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02 18:40:41 2000
> > >From bounce-ss-17222@lists.tapr.org Wed Aug 02 18:45:28 2000
> > >Return-Path: <ussailis@equinox.shaysnet.com>
> > >In-Reply-To:
> >
> ><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>
> > >Message-ID:
> >
> ><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.org>
> > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > >List-Software: Lyris Server version 3.0
> > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > >X-Message-Id:
><Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> > >Sender: bounce-ss-17222@lists.tapr.org
> > >Precedence: bulk
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> > >
> > >ussailis@shaysnet.com

> > >
> > >
> > >---
> > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > >
> >
> > _____
> > Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
> >
> >
> >
> >
> > ---
> >
> > END OF DIGEST
> >
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Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Re: ss digest: August 03, 2000

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Sat, 5 Aug 2000 01:00:44 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-100748-2000.08.05-00.06.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've been reading about modulation formats, coding, etc quite a bit lately.
Here's some top level conclusions...

OFDM doesn't do anything unique with respect to the Shannon limit. What it
does is allow for good signal reception in the presence of multipath.
because it splits the data stream up over many separate carriers
transmitting at low speed....and each very slow stream is immune to
multipath. It's up to the designer to apply a modulation and coding to each
carrier to optimize performance. The upcoming IEEE 802.11 OFDM variant will
define a common approach for that application.

By the way, OFDM would be great for microwave repeaters intended work with
mobiles. Mobile flutter (chop) increases in frequency, proportional to
operating frequency. At 10 GHz, its a 400Hz buzz. With OFDM, all that
stuff disappears. In theory, Someone could make a voice bandwidth OFDM
system with a PC and a sound card. Any takers?

Another by the way. OFDM is _not_ spread spectrum. The carriers are packed
together so tightly, they overlap...that's what the "orthogonal" part of the
name means.

Coding is commonly used to get closer to the Shannon limit. Without coding,
a link might only get to 3-10% of theoretical capacity. Traditional block
codes such as Reed-Solomon might push that to 20%. Recently, "Turbo" codes
which iteratively process the data have pushed capacity to >80%. Turbo
codes are just starting to appear in products and require a complex ASIC or
lots of processing. They also introduce significantly increased delay
compared to other earlier approaches. Turbo codes work by modeling the
strongest interference and subtracting it from the signal, then subtracting
the next strongest interferer, etc until the best possible signal is
recovered.

If you're interested in the latest algorithms that improve
capacity...possibly even "beating Shannon" (depends on your definition),
check out Bell Labs Space Time Adaptive Processing (BLAST). They use
multiple transmitters/antennas and multiple receivers/antennas and transmit

different portions of the data stream from each transmitter and receive all
the stream on each receiver. Laboratory experiments show upwards of 30
bits/sec per Hz of bandwidth...(1 Mbps in a 30 kHz channel)   This this is
not ready for prime time, takes gobs of computer power, and requires several
advanced degrees in signal processing and math to work with it. But with
chips getting more powerful and spectrum costing $B, it will get popular in
10 years or so. BLAST works with Turbo codes techniques (iterative
subtraction) to sort out all the overlapping carriers and multipath
effects....sounds like magic but it really works.

hope this helps,

jeff
wa1hco

----- Original Message -----
From: "venumadhav josyula" <venumadhavj@hotmail.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Friday, August 04, 2000 11:35 PM
Subject: [ss] Re: ss digest: August 03, 2000

>
> But whole issue for wireles service providers is provide multimedia
services
> through ur network nad integrate with the present ip/atm networks. So in
> order to provide those
> you will require varying data rates and depending upon the application.
That
> needs to be provided. Plus services require raonably good range and your
> devices need to be more capable.
>
> I agree with you about dependability of capacity on shannon's theorem, but
> my question is'nt it possible to maintain high date rate using
multicarrier
> modulation scheme such as OFDM, and provide reasonably good coding schemes
> to improve the range. Thus making system less sensitive to frequency
errors.
>
> Because as your data rate (but this HDR is only possible with some kind of
> MC* scheme) is increased, your system becomes more sentive to frequency
> errors and hence provision needs to be made to combat those.
>
> Sir I am asking this because, I doing and reearch dessertation on this
topic
> since I am an student.
>
> cheers
> venu
>
> * MULTI-CARRIER.
> >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> >Reply-To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >CC: ss digest recipients <ss@lists.tapr.org>
> >Subject: [ss] Re: ss digest: August 03, 2000
> >Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
> >MIME-Version: 1.0
> >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> >MHotMailBB54C6A90031D82197EBCC11D9180CF30; Fri Aug 04 19:27:54 2000
> >From bounce-ss-17222@lists.tapr.org Fri Aug 04 19:29:33 2000
> >Return-Path: <ussailis@equinox.shaysnet.com>
> >In-Reply-To:
>
><LYR16486-100466-2000.08.04-00.01.21--ussailis#shaysnet.com@lists.tapr.org>
> >Message-ID:
>
><LYR17222-100690-2000.08.04-21.32.13--venumadhavj#hotmail.com@lists.tapr.or
g>
> >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> >List-Software: Lyris Server version 3.0
> >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> >List-Owner: <mailto:owner-ss@lists.tapr.org>
> >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> >X-Message-Id: <Pine.3.89.10008042219.A17693-0100000@equinox.shaysnet.com>
> >Sender: bounce-ss-17222@lists.tapr.org
> >Precedence: bulk
> >

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> >
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> >provides, then there is a lessor maximum given real hardware (as opposed
> >to theoretical hardware).
> >
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> > > >CC: ss digest recipients <ss@lists.tapr.org>
> > > >Subject: [ss] Re: ss digest: August 01, 2000
> > > >Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
> > > >MIME-Version: 1.0
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> > > >Return-Path: <ussailis@equinox.shaysnet.com>
> > > >In-Reply-To:
> > >
> >
><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>
> > > >Message-ID:
> > >
> >
><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.or
g>
> > > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > > >List-Software: Lyris Server version 3.0
> > > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > > >X-Message-Id:
> ><Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> > > >Sender: bounce-ss-17222@lists.tapr.org
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> > > >
> > > >---W1EQO
> > > >
> > > >ussailis@shaysnet.com
> > > >
> > > >
> > > >---
> > > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > > >
> > >
> > >
_____
> > > Get Your Private, Free E-mail from MSN Hotmail at
http://www.hotmail.com
> > >
> > >
> > >
> > >
> > > ---
> > >
> > > END OF DIGEST
> > >
> > > ---
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>
> _____
> Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] Re: ss digest: August 04, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Sun, 6 Aug 2000 20:47:10 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-101075-2000.08.06-19.51.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Range vs data rate....Lets look at several things:

1. Yes, you can use a higher level modulation scheme to get a better data

rate. But there is a practical limit. That limit is generally imposed by
phase or amplitude error across the receiver passband, or by
signal-to-carrier level.

The first item kills receivers. Either there is a lot of phase error in a
passband, (as with Butterworth / Tchebvychev filters) or there is a large
amplitude error in the passband (as with Bessel and some butterworth
filters).

2. The second problem is entropy. This is a consequence of the second law
of thermodynamics. It says, simply, "There ain't any free lunch!" This is
probably beyond what people want plugging their email with here. But
Shannon's work comes out of this.

So it comes down to the following problem...Yes, you could cook-up an
adaptive bandpass scheme that would allow long range / slow data rate
some of the time, but...The transmitter -to- receiver path is usually
fixed, so the path wouldn't work all of the time. If the product only
works some of the time, people usually won't buy it.

The answer, then, is somewhat country based. Many countries in the EEC
allow 1/2 Watt for unlicensed communication. Here it is under 1
milliWatt, unless spread-spectrum modulation is used.

Finally, what will happen when people want broadband wireless, say, across
town? Here in the New England States, "across town" equals 4 or 5 miles, often
more. Sure won't work with 1 mW. Not be too reliable with 1/2 Watt.

I've rambled enough.

Jim, W1EQO

On Sat, 5 Aug 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Friday, August 04, 2000.
>
> 1. Re: ss digest: August 03, 2000
> 2. Re: ss digest: August 03, 2000
>
> --
>
> Subject: Re: ss digest: August 03, 2000
> From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
> X-Message-Number: 1
>
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> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> Date: Sat, 05 Aug 2000 03:35:51 GMT
> X-Message-Number: 2
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> >Precedence: bulk
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> >Well, that's the problem. Everybody wants a faster data rate. If
> >everything else is a constant, range must suffer, or one must transmit
> >more info/bit.
> >
> >The info/bit stuff is covered by Shannon. There is a maximum that he
> >provides, then there is a lessor maximum given real hardware (as opposed
> >to theoretical hardware).
> >
> >So, my point is, unless you want a slower data rate, you must increase
> >power to get more range. There is no free lunch!
> >
> >Jim, W1EQO
> >
> >
> >On Fri, 4 Aug 2000, TAPR Spread Spectrum Special Interest Group digest
> >wrote:
> >
> > > TAPR Spread Spectrum Special Interest Group Digest for Thursday, August
> >03, 2000.
> > >
> > > 1. Re: ss digest: August 01, 2000
> > >
> > > --
> > >
> > > Subject: Re: ss digest: August 01, 2000
> > > From: "venumadhav josyula" <venumadhavj@hotmail.com>

> > > Date: Thu, 03 Aug 2000 11:52:42 GMT
> > > X-Message-Number: 1
> > >
> > > Hello jim,
> > >
> > > In what context are u talking. What for high date services, where u
> >would
> > > not want to reduce your data rate. Are there any other ways to improve
> > > sensitivity/range. I am talking in sense to HDR services proposed by
> > > QUALCOMM. Generally speaking, about variable data rates SS
> > > system.
> > >
> > > thanking you
> > > yours sincerely
> > > venu
> > >
> > >
> > >
> > > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> ><ss@lists.tapr.org>
> > > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > > >CC: ss digest recipients <ss@lists.tapr.org>
> > > >Subject: [ss] Re: ss digest: August 01, 2000
> > > >Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
> > > >MIME-Version: 1.0
> > > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > > >MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02 18:40:41 2000
> > > >From bounce-ss-17222@lists.tapr.org Wed Aug 02 18:45:28 2000
> > > >Return-Path: <ussailis@equinox.shaysnet.com>
> > > >In-Reply-To:
> > >
> > ><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>
> > > >Message-ID:
> > >
> > ><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.org>
> > > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > > >List-Software: Lyris Server version 3.0
> > > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > > >X-Message-Id:
> ><Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> > > >Sender: bounce-ss-17222@lists.tapr.org
> > > >Precedence: bulk
> > > >
> > > >A comment on data rate & sensitivity / range.
> > > >
> > > >The trick to getting a very good range (for a fixed transmitter power)
> >on a
> > > >data system is to reduce the receiver bandwidth. The sensitivity
> >changes
> > > >by 10 Log (new bandwidth / previous bandwidth). Of course reducing
> > > >the bandwidth reduces the data rate. Nothing free.
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> > > >The problem with this is that for many systems reducing the data rate
> > > >does not reduce the receiver bandwidth. That is generally fixed by the
> >IF
> > > >or video filters. Unless adaptive filters are employed.
> > > >
> > > >---
> > > >
> > > >Does anyone out there know where I can find a schematic for a Costas
> >loop
> > > >detector? Sure would be a BIG help.
> > > >
> > > >
> > > >---W1EQO
> > > >
> > > >ussailis@shaysnet.com
> > > >
> > > >
> > > >---
> > > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > > >
> > >
> > > ____
> > > Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

> > >
> > >
> > >
> > >
> > > ---
> > >
> > > END OF DIGEST
> > >
> > > ---
> > > You are currently subscribed to ss as: ussailis@shaysnet.com
> > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
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> > >
> >
> >---
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>
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> You are currently subscribed to ss as: ussailis@shaysnet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] Re: ss digest: August 05, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Sun, 6 Aug 2000 20:55:49 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-101078-2000.08.06-20.00.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jeff,

Where do I find out about this coding scheme. Two items puzzle me:

1. The olde ECM trick of beating multipath is to use "leading-edge
gating." That is use a very small leading edge of the pulse. Others use a
trick like this, they use very short pulses, to beat multipath.

2. Mathematically, orthogonal means "at right angles," or
non-overlapping. DS-SS codes are usually selected to be orthogonal.

Jim, W1EQO

ussailis@shaysnet.com

On Sun, 6 Aug 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Saturday, August 05, 2000.
>
> 1. Re: ss digest: August 03, 2000
>
 > --
>
> Subject: Re: ss digest: August 03, 2000
> From: "jeff millar" <jeff@wa1hco.mv.com>
> Date: Sat, 5 Aug 2000 01:00:44 -0400
> X-Message-Number: 1
>
> I've been reading about modulation formats, coding, etc quite a bit lately.
> Here's some top level conclusions...
>

> OFDM doesn't do anything unique with respect to the Shannon limit. What it
> does is allow for good signal reception in the presence of multipath.
> because it splits the data stream up over many separate carriers
> transmitting at low speed....and each very slow stream is immune to
> multipath. It's up to the designer to apply a modulation and coding to each
> carrier to optimize performance. The upcoming IEEE 802.11 OFDM variant will
> define a common approach for that application.
>
> By the way, OFDM would be great for microwave repeaters intended work with
> mobiles. Mobile flutter (chop) increases in frequency, proportional to
> operating frequency. At 10 GHz, its a 400Hz buzz. With OFDM, all that
> stuff disappears. In theory, Someone could make a voice bandwidth OFDM
> system with a PC and a sound card. Any takers?
>
> Another by the way. OFDM is _not_ spread spectrum. The carriers are packed
> together so tightly, they overlap...that's what the "orthogonal" part of the
> name means.
>
> Coding is commonly used to get closer to the Shannon limit. Without coding,
> a link might only get to 3-10% of theoretical capacity. Traditional block
> codes such as Reed-Solomon might push that to 20%. Recently, "Turbo" codes
> which iteratively process the data have pushed capacity to >80%. Turbo
> codes are just starting to appear in products and require a complex ASIC or
> lots of processing. They also introduce significantly increased delay
> compared to other earlier approaches. Turbo codes work by modeling the
> strongest interference and subtracting it from the signal, then subtracting
> the next strongest interferer, etc until the best possible signal is
> recovered.
>
> If you're interested in the latest algorithms that improve
> capacity...possibly even "beating Shannon" (depends on your definition),
> check out Bell Labs Space Time Adaptive Processing (BLAST). They use
> multiple transmitters/antennas and multiple receivers/antennas and transmit
> different portions of the data stream from each transmitter and receive all
> the stream on each receiver. Laboratory experiments show upwards of 30
> bits/sec per Hz of bandwidth...(1 Mbps in a 30 kHz channel)   This this is
> not ready for prime time, takes gobs of computer power, and requires several
> advanced degrees in signal processing and math to work with it. But with
> chips getting more powerful and spectrum costing $B, it will get popular in
> 10 years or so. BLAST works with Turbo codes techniques (iterative
> subtraction) to sort out all the overlapping carriers and multipath
> effects....sounds like magic but it really works.
>
> hope this helps,
>
> jeff
> wa1hco
>
> ----- Original Message -----
> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Friday, August 04, 2000 11:35 PM
> Subject: [ss] Re: ss digest: August 03, 2000
>
>
> > > But whole issue for wireles service providers is provide multimedia
> services
> > > through ur network nad integrate with the present ip/atm networks. So in
> > > order to provide those
> > > you will require varying data rates and depending upon the application.
> That
> > > needs to be provided. Plus services require raonably good range and your
> > > devices need to be more capable.
> > >
> > > I agree with you about dependability of capacity on shannon's theorem, but
> > > my question is'nt it possible to maintain high date rate using
> multicarrier
> > > modulation scheme such as OFDM, and provide reasonably good coding schemes
> > > to improve the range. Thus making system less sensitive to frequency
> errors.
> > >
> > > Because as your data rate (but this HDR is only possible with some kind of
> > > MC* scheme) is increased, your system becomes more sentive to frequency
> > > errors and hence provision needs to be made to combat those.
> > >
> > > Sir I am asking this because, I doing and reearch dessertation on this
> topic
> > > since I am an student.

> >
> > cheers
> > venu
> >
> > * MULTI-CARRIER.
> > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> <ss@lists.tapr.org>
> > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > >CC: ss digest recipients <ss@lists.tapr.org>
> > >Subject: [ss] Re: ss digest: August 03, 2000
> > >Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
> > >MIME-Version: 1.0
> > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > >MHotMailBB54C6A90031D82197EBCC11D9180CF30; Fri Aug 04 19:27:54 2000
> > >From bounce-ss-17222@lists.tapr.org Fri Aug 04 19:29:33 2000
> > >Return-Path: <ussailis@equinox.shaysnet.com>
> > >In-Reply-To:
> >
> ><LYR16486-100466-2000.08.04-00.01.21--ussailis#shaysnet.com@lists.tapr.org>
> > >Message-ID:
> >
> ><LYR17222-100690-2000.08.04-21.32.13--venumadhavj#hotmail.com@lists.tapr.or
> g>
> > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > >List-Software: Lyris Server version 3.0
> > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > >X-Message-Id: <Pine.3.89.10008042219.A17693-0100000@equinox.shaysnet.com>
> > >Sender: bounce-ss-17222@lists.tapr.org
> > >Precedence: bulk
> > >
> > >Well, that's the problem. Everybody wants a faster data rate. If
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> > >
> > >The info/bit stuff is covered by Shannon. There is a maximum that he
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> > > > TAPR Spread Spectrum Special Interest Group Digest for Thursday,
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> > > >
> > > > 1. Re: ss digest: August 01, 2000
> > > >
> > > > --
> > > >
> > > > Subject: Re: ss digest: August 01, 2000
> > > > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> > > > Date: Thu, 03 Aug 2000 11:52:42 GMT
> > > > X-Message-Number: 1
> > > >
> > > > Hello jim,
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> > > > In what context are u talking. What for high date services, where u
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> > > >
> > > > thanking you
> > > > yours sincerely
> > > > venu
> > > >
> > > >
> > > >
> > > > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>

> > > > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> > ><ss@lists.tapr.org>
> > > > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > > > >CC: ss digest recipients <ss@lists.tapr.org>
> > > > >Subject: [ss] Re: ss digest: August 01, 2000
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> > > > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > > > >MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02 18:40:41 2000
> > > > >From bounce-ss-17222@lists.tapr.org Wed Aug 02 18:45:28 2000
> > > > >Return-Path: <ussailis@equinox.shaysnet.com>
> > > > >In-Reply-To:
> > > >
> > >
> ><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>
> > > > >Message-ID:
> > > >
> > >
> ><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.or
> g>
> > > > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > > > >List-Software: Lyris Server version 3.0
> > > > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > > > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > > > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > > > >X-Message-Id:
> > ><Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> > > > >Sender: bounce-ss-17222@lists.tapr.org
> > > > >Precedence: bulk
> > > > >
> > > > >A comment on data rate & sensitivity / range.
> > > > >
> > > > >The trick to getting a very good range (for a fixed transmitter
> power)
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> > > > >data system is to reduce the receiver bandwidth. The sensitivity
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> > > > >the bandwidth reduces the data rate. Nothing free.
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> > > > >The problem with this is that for many systems reducing the data rate
> > > > >does not reduce the receiver bandwidth. That is generally fixed by
> the
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> > > > >or video filters. Unless adaptive filters are employed.
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> > > > >---
> > > > >
> > > > >Does anyone out there know where I can find a schematic for a Costas
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> > > > >detector? Sure would be a BIG help.
> > > > >
> > > > >
> > > > >---W1EQO
> > > > >
> > > > >ussailis@shaysnet.com
> > > > >
> > > > >
> > > > >---
> > > > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > > > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > > > >
> > > >
> > > >
> ____
> > > > Get Your Private, Free E-mail from MSN Hotmail at
> http://www.hotmail.com
> > > >
> > > >
> > > >
> > > >
> > > > ---
> > > >
> > > > END OF DIGEST
> > > >
> > > > ---
> > > > You are currently subscribed to ss as: ussailis@shaysnet.com
> > > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
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> > > >
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> > >---
> > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > >
> >
> > _____
> > Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com
> >
> >
> > ---
> > You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] Re: ss digest: August 05, 2000

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Sun, 6 Aug 2000 23:14:37 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101111-2000.08.06-22.21.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Here's a few pointers to OFDM sites. The europeans have the best
descriptions because they've already selected it for digital radio and video
broadcasting

    http://www.ert.rwth-aachen.de/Projekte/Theo/OFDM/node1.html
    http://www.wilan.com/ofdm/main.html
    http://www.winlab.rutgers.edu/~sinhar/ofdm.html

Multipath causes two effects, overlapping symbols if the symbol rate exceeds
the delay dispersion and carrier cancelation (mobile flutter). OFDM attacks
the first by slowing the modulation rate. The transmitted bit stream is
demultiplexed into many (100's to 1000's) of separate streams and each
modulates a separate carrier. The symbol time increases by 100's or 1000's
and the effect of multipath is reduced. Delay dispersion no longer causes
intersymbol interference. For example assume a 1M bps data stream and 1024
carriers. Allowed delay dispersion increases from about 1 us to 1 ms.

Flutter is handled a different way. The data stream get run through a
forward error correction, such as Reed-Solomon, and receivers can decode
correctly even in the presence of dropouts. In addition, the individual
carriers probably drop out at different times due to frequency
diversity...keeping the coding effective.

The term orthogonal is used because the carriers are independent of each
other in a mathmatical sense...as is normal for a frequency division
multiplex. But OFDM packs the carriers very close together and doesn't
bother to tightly filter them. The carriers are generated by an Inverse FFT
(time to frequency domain) and received by a forward FFT. Each carrier looks
like a sinc function in the frequency domain...a central peak with ripples
and zero crossings away from the central peak. The adjacent carriers land
exactly on the zero crossing. The diagrams look exactly like zero
intersymbol interference in the time domain filtering but mapped into the
frequency domain. Orthogonality is maintained by frequency locking to the
transmitted signal and maintaining lots of precision in the receiver's FFT.

hope this helps,

jeff wa1hco

----- Original Message -----
From: "Jim Ussailis" <ussailis@equinox.shaysnet.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "ss digest recipients" <ss@lists.tapr.org>
Sent: Sunday, August 06, 2000 8:55 PM
Subject: [ss] Re: ss digest: August 05, 2000

> Jeff,
>
> Where do I find out about this coding scheme. Two items puzzle me:
>
> 1. The olde ECM trick of beating multipath is to use "leading-edge
> gating." That is use a very small leading edge of the pulse. Others use a
> trick like this, they use very short pulses, to beat multipath.
>
> 2. Mathematically, orthogonal means "at right angles," or
> non-overlapping. DS-SS codes are usually selected to be orthogonal.
>
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> Jim, W1EQO
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> ussailis@shaysnet.com
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wrote:
>
> > TAPR Spread Spectrum Special Interest Group Digest for Saturday, August
05, 2000.
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> > 1. Re: ss digest: August 03, 2000
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> > Subject: Re: ss digest: August 03, 2000
> > From: "jeff millar" <jeff@wa1hco.mv.com>
> > Date: Sat, 5 Aug 2000 01:00:44 -0400
> > X-Message-Number: 1
> >
> > I've been reading about modulation formats, coding, etc quite a bit
lately.
> > Here's some top level conclusions...
> >
> > OFDM doesn't do anything unique with respect to the Shannon limit. What
it
> > does is allow for good signal reception in the presence of multipath.
> > because it splits the data stream up over many separate carriers
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the
> > name means.
> >
> > Coding is commonly used to get closer to the Shannon limit. Without
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> > a link might only get to 3-10% of theoretical capacity. Traditional
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> > which iteratively process the data have pushed capacity to >80%. Turbo
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or
> > lots of processing. They also introduce significantly increased delay

> > compared to other earlier approaches. Turbo codes work by modeling the
> > strongest interference and subtracting it from the signal, then
subtracting
> > the next strongest interferer, etc until the best possible signal is
> > recovered.
> >
> > If you're interested in the latest algorithms that improve
> > capacity...possibly even "beating Shannon" (depends on your definition),
> > check out Bell Labs Space Time Adaptive Processing (BLAST). They use
> > multiple transmitters/antennas and multiple receivers/antennas and
transmit
> > different portions of the data stream from each transmitter and receive
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> > the stream on each receiver. Laboratory experiments show upwards of 30
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> > subtraction) to sort out all the overlapping carriers and multipath
> > effects....sounds like magic but it really works.
> >
> > hope this helps,
> >
> > jeff
> > wa1hco
> >
> > ----- Original Message -----
> > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> > To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > Sent: Friday, August 04, 2000 11:35 PM
> > Subject: [ss] Re: ss digest: August 03, 2000
> >
> >
> > >
> > > But whole issue for wireles service providers is provide multimedia
> > services
> > > through ur network nad integrate with the present ip/atm networks. So
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your
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> > >
> > > I agree with you about dependability of capacity on shannon's theorem,
but
> > > my question is'nt it possible to maintain high date rate using
> > multicarrier
> > > modulation scheme such as OFDM, and provide reasonably good coding
schemes
> > > to improve the range. Thus making system less sensitive to frequency
> > errors.
> > >
> > > Because as your data rate (but this HDR is only possible with some
kind of
> > > MC* scheme) is increased, your system becomes more sentive to
frequency
> > > errors and hence provision needs to be made to combat those.
> > >
> > > Sir I am asking this because, I doing and reearch dessertation on this
> > topic
> > > since I am an student.
> > >
> > > cheers
> > > venu
> > >
> > > * MULTI-CARRIER.
> > > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> > <ss@lists.tapr.org>
> > > >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> > > >CC: ss digest recipients <ss@lists.tapr.org>

> > > >Subject: [ss] Re: ss digest: August 03, 2000
> > > >Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
> > > >MIME-Version: 1.0
> > > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > > >MHotMailBB54C6A90031D82197EBCC11D9180CF30; Fri Aug 04 19:27:54 2000
> > > >From bounce-ss-17222@lists.tapr.org Fri Aug 04 19:29:33 2000
> > > >Return-Path: <ussailis@equinox.shaysnet.com>
> > > >In-Reply-To:
> > > >
> >
><LYR16486-100466-2000.08.04-00.01.21--ussailis#shaysnet.com@lists.tapr.org>
> > > >Message-ID:
> > > >
> >
><LYR17222-100690-2000.08.04-21.32.13--venumadhavj#hotmail.com@lists.tapr.or
> > g>
> > > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > > >List-Software: Lyris Server version 3.0
> > > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > > >X-Message-Id:
<Pine.3.89.10008042219.A17693-0100000@equinox.shaysnet.com>
> > > >Sender: bounce-ss-17222@lists.tapr.org
> > > >Precedence: bulk
> > > >
> > > >Well, that's the problem. Everybody wants a faster data rate. If
> > > >everything else is a constant, range must suffer, or one must
transmit
> > > >more info/bit.
> > > >
> > > >The info/bit stuff is covered by Shannon. There is a maximum that he
> > > >provides, then there is a lessor maximum given real hardware (as
opposed
> > > >to theoretical hardware).
> > > >
> > > >So, my point is, unless you want a slower data rate, you must
increase
> > > >power to get more range. There is no free lunch!
> > > >
> > > >Jim, W1EQO
> > > >
> > > >
> > > >On Fri, 4 Aug 2000, TAPR Spread Spectrum Special Interest Group
digest
> > > >wrote:
> > > >
> > > > > TAPR Spread Spectrum Special Interest Group Digest for Thursday,
> > August
> > > >03, 2000.
> > > > >
> > > > > 1. Re: ss digest: August 01, 2000
> > > > >
> > > >
> --
> > > > >
> > > > > Subject: Re: ss digest: August 01, 2000
> > > > > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> > > > > Date: Thu, 03 Aug 2000 11:52:42 GMT
> > > > > X-Message-Number: 1
> > > > >
> > > > > Hello jim,
> > > > >
> > > > > In what context are u talking. What for high date services, where
u
> > > >would
> > > > > not want to reduce your data rate. Are there any other ways to
improve
> > > > > sensitivity/range. I am talking in sense to HDR services proposed
by
> > > > > QUALCOMM. Generally speaking, about variable data rates SS
> > > > > system.
> > > > >
> > > > > thanking you
> > > > > yours sincerely
> > > > > venu
> > > > >
> > > > >
> > > > >

> > > > > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > > > > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> > > ><ss@lists.tapr.org>
> > > > > >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
> > > > > >CC: ss digest recipients <ss@lists.tapr.org>
> > > > > >Subject: [ss] Re: ss digest: August 01, 2000
> > > > > >Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
> > > > > >MIME-Version: 1.0
> > > > > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > > > > >MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02 18:40:41
2000
> > > > > >From bounce-ss-17222@lists.tapr.org Wed Aug 02 18:45:28 2000
> > > > > >Return-Path: <ussailis@equinox.shaysnet.com>
> > > > > >In-Reply-To:
> > > > >
> > > > >
> >
><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@lists.tapr.org>
> > > > > >Message-ID:
> > > > >
> > > > >
> >
><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@lists.tapr.or
> > g>
> > > > > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > > > > >List-Software: Lyris Server version 3.0
> > > > > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > > > > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > > > > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > > > > >X-Message-Id:
> > > ><Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> > > > > >Sender: bounce-ss-17222@lists.tapr.org
> > > > > >Precedence: bulk
> > > > > >
> > > > > >A comment on data rate & sensitivity / range.
> > > > > >
> > > > > >The trick to getting a very good range (for a fixed transmitter
> > power)
> > > > >on a
> > > > > >data system is to reduce the receiver bandwidth. The sensitivity
> > > >changes
> > > > > >by 10 Log (new bandwidth / previous bandwidth). Of course
reducing
> > > > > >the bandwidth reduces the data rate. Nothing free.
> > > > > >
> > > > > >The problem with this is that for many systems reducing the data
rate
> > > > > >does not reduce the receiver bandwidth. That is generally fixed
by
> > the
> > > > >IF
> > > > > >or video filters. Unless adaptive filters are employed.
> > > > > >
> > > > > >---
> > > > > >
> > > > > >Does anyone out there know where I can find a schematic for a
Costas
> > > >loop
> > > > > >detector? Sure would be a BIG help.
> > > > > >
> > > > > >
> > > > > >---W1EQO
> > > > > >
> > > > > >ussailis@shaysnet.com
> > > > > >
> > > > > >
> > > > > >---
> > > > > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > > > > >To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
> > > > > >
> > > > >
> > > > >
> > _____
> > > > > Get Your Private, Free E-mail from MSN Hotmail at
> > http://www.hotmail.com
> > > > >
> > > > >

> > > > >
> > > > >
> > > > > ---
> > > > > >
> > > > > > END OF DIGEST
> > > > > >
> > > > > > ---
> > > > > > You are currently subscribed to ss as: ussailis@shaysnet.com
> > > > > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > > > > >
> > > > > >
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> > > > >---
> > > > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > > > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > > > >
> > > >
> > > >
_____
> > > Get Your Private, Free E-mail from MSN Hotmail at
http://www.hotmail.com
> > > >
> > > >
> > > > ---
> > > > You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> > > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > > >
> > > >
> > >
> > >
> > >
> > >
> > > ---
> > >
> > > END OF DIGEST
> > >
> > > ---
> > > You are currently subscribed to ss as: ussailis@shaysnet.com
> > > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > >
> > >
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: ss digest: August 05, 2000

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Mon, 7 Aug 2000 10:08:27 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101179-2000.08.07-09.14.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

BLAST is described in several references from here:

http://www-out.bell-labs.com/project/blast/

It's sort of like a rake receiver where the rake fingers can track separate signals, with smart antennas, coding, and lots of signal processing on both sides. You get around the Shannon limit on channel capacity because it's not really a single channel anymore, but multiple channels conveyed through the bit of spatial diversity created by multipath. I find it ingenious, but very complicated. I'm very curious to see how it pans out in the real world.

I'm not really a believer in the "we need lots of capacity to provide multimedia services" camp, though. That's a solution (or more precisely, a pile of capital) in search of a problem.

    -----Original Message-----
    From: bounce-ss-9486@lists.tapr.org

[mailto:bounce-ss-9486@lists.tapr.org]On Behalf Of Jim Ussailis
Sent: Sunday, August 06, 2000 8:56 PM
To: TAPR Spread Spectrum Special Interest Group
Cc: ss digest recipients
Subject: [ss] Re: ss digest: August 05, 2000

Jeff,

Where do I find out about this coding scheme. Two items puzzle me:

1. The olde ECM trick of beating multipath is to use "leading-edge
gating." That is use a very small leading edge of the pulse.
Others use a
trick like this, they use very short pulses, to beat multipath.

2. Mathematically, orthogonal means "at right angles," or
non-overlapping. DS-SS codes are usually selected to be orthogonal.

Jim, W1EQO

ussailis@shaysnet.com

On Sun, 6 Aug 2000, TAPR Spread Spectrum Special Interest Group
digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for
Saturday, August 05, 2000.
>
> 1. Re: ss digest: August 03, 2000
>
 >

>
> Subject: Re: ss digest: August 03, 2000
> From: "jeff millar" <jeff@wa1hco.mv.com>
> Date: Sat, 5 Aug 2000 01:00:44 -0400
> X-Message-Number: 1
>
> I've been reading about modulation formats, coding, etc quite
a bit lately.
> Here's some top level conclusions...
>
> OFDM doesn't do anything unique with respect to the Shannon
limit. What it
> does is allow for good signal reception in the presence of multipath.
> because it splits the data stream up over many separate carriers
> transmitting at low speed....and each very slow stream is immune to
> multipath. It's up to the designer to apply a modulation and
coding to each
> carrier to optimize performance. The upcoming IEEE 802.11
OFDM variant will
> define a common approach for that application.
>
> By the way, OFDM would be great for microwave repeaters
intended work with
> mobiles. Mobile flutter (chop) increases in frequency,
proportional to
> operating frequency. At 10 GHz, its a 400Hz buzz. With
OFDM, all that
> stuff disappears. In theory, Someone could make a voice
bandwidth OFDM
> system with a PC and a sound card. Any takers?
>
> Another by the way. OFDM is _not_ spread spectrum. The
carriers are packed
> together so tightly, they overlap...that's what the
"orthogonal" part of the
> name means.
>
> Coding is commonly used to get closer to the Shannon limit.
Without coding,
> a link might only get to 3-10% of theoretical capacity.
Traditional block
> codes such as Reed-Solomon might push that to 20%. Recently,
"Turbo" codes
> which iteratively process the data have pushed capacity to
>80%. Turbo

> codes are just starting to appear in products and require a
complex ASIC or
> lots of processing. They also introduce significantly increased delay
> compared to other earlier approaches. Turbo codes work by
modeling the
> strongest interference and subtracting it from the signal,
then subtracting
> the next strongest interferer, etc until the best possible signal is
> recovered.
>
> If you're interested in the latest algorithms that improve
> capacity...possibly even "beating Shannon" (depends on your
definition),
> check out Bell Labs Space Time Adaptive Processing (BLAST). They use
> multiple transmitters/antennas and multiple
receivers/antennas and transmit
> different portions of the data stream from each transmitter
and receive all
> the stream on each receiver. Laboratory experiments show
upwards of 30
> bits/sec per Hz of bandwidth...(1 Mbps in a 30 kHz channel)
This this is
> not ready for prime time, takes gobs of computer power, and
requires several
> advanced degrees in signal processing and math to work with
it. But with
> chips getting more powerful and spectrum costing $B, it will
get popular in
> 10 years or so. BLAST works with Turbo codes techniques (iterative
> subtraction) to sort out all the overlapping carriers and multipath
> effects....sounds like magic but it really works.
>
> hope this helps,
>
> jeff
> wa1hco
>
> ----- Original Message -----
> From: "venumadhav josyula" <venumadhavj@hotmail.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Friday, August 04, 2000 11:35 PM
> Subject: [ss] Re: ss digest: August 03, 2000
>
>
> >
> > But whole issue for wireles service providers is provide multimedia
> services
> > through ur network nad integrate with the present ip/atm
networks. So in
> > order to provide those
> > you will require varying data rates and depending upon the
application.
> That
> > needs to be provided. Plus services require raonably good
range and your
> > devices need to be more capable.
> >
> > I agree with you about dependability of capacity on
shannon's theorem, but
> > my question is'nt it possible to maintain high date rate using
> multicarrier
> > modulation scheme such as OFDM, and provide reasonably good
coding schemes
> > to improve the range. Thus making system less sensitive to frequency
> errors.
> >
> > Because as your data rate (but this HDR is only possible
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> > MC* scheme) is increased, your system becomes more sentive
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> >
> > Sir I am asking this because, I doing and reearch
dessertation on this
> topic
> > since I am an student.
> >
> > cheers
> > venu

> >
> > * MULTI-CARRIER.
> > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
> <ss@lists.tapr.org>
> > >To: "TAPR Spread Spectrum Special Interest Group"
<ss@lists.tapr.org>
> > >CC: ss digest recipients <ss@lists.tapr.org>
> > >Subject: [ss] Re: ss digest: August 03, 2000
> > >Date: Fri, 4 Aug 2000 22:27:36 -0400 (EDT)
> > >MIME-Version: 1.0
> > >Received: from [204.17.217.24] by hotmail.com (3.2) with ESMTP id
> > >MHotMailBB54C6A90031D82197EBCC11D9180CF30; Fri Aug 04 19:27:54 2000
> > >From bounce-ss-17222@lists.tapr.org Fri Aug 04 19:29:33 2000
> > >Return-Path: <ussailis@equinox.shaysnet.com>
> > >In-Reply-To:
> >
>
><LYR16486-100466-2000.08.04-00.01.21--ussailis#shaysnet.com@lis
ts.tapr.org>
> > >Message-ID:
> >
>
><LYR17222-100690-2000.08.04-21.32.13--venumadhavj#hotmail.com@l
ists.tapr.or
> g>
> > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > >List-Software: Lyris Server version 3.0
> > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > >X-Message-Id:
<Pine.3.89.10008042219.A17693-0100000@equinox.shaysnet.com>
> > >Sender: bounce-ss-17222@lists.tapr.org
> > >Precedence: bulk
> > >
> > >Well, that's the problem. Everybody wants a faster data rate. If
> > >everything else is a constant, range must suffer, or one
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> > >
> > >The info/bit stuff is covered by Shannon. There is a
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hardware (as opposed
> > >to theoretical hardware).
> > >
> > >So, my point is, unless you want a slower data rate, you
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> > >
> > >Jim, W1EQO
> > >
> > >
> > >On Fri, 4 Aug 2000, TAPR Spread Spectrum Special Interest
Group digest
> > >wrote:
> > >
> > > > TAPR Spread Spectrum Special Interest Group Digest for Thursday,
> August
> > >03, 2000.
> > > >
> > > > 1. Re: ss digest: August 01, 2000
> > > >
> > > >

> > > >
> > > > Subject: Re: ss digest: August 01, 2000
> > > > From: "venumadhav josyula" <venumadhavj@hotmail.com>
> > > > Date: Thu, 03 Aug 2000 11:52:42 GMT
> > > > X-Message-Number: 1
> > > >
> > > > Hello jim,
> > > >
> > > > In what context are u talking. What for high date
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> > > > not want to reduce your data rate. Are there any other
ways to improve

> > > > sensitivity/range. I am talking in sense to HDR
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> > > > QUALCOMM. Generally speaking, about variable data rates SS
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> > > >
> > > > >From: Jim Ussailis <ussailis@equinox.shaysnet.com>
> > > > >Reply-To: "TAPR Spread Spectrum Special Interest Group"
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> > > > >CC: ss digest recipients <ss@lists.tapr.org>
> > > > >Subject: [ss] Re: ss digest: August 01, 2000
> > > > >Date: Wed, 2 Aug 2000 21:39:48 -0400 (EDT)
> > > > >MIME-Version: 1.0
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with ESMTP id
> > > > >MHotMailBB52189800BCD820F3C6CC11D9180C240; Wed Aug 02
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> > > > >Return-Path: <ussailis@equinox.shaysnet.com>
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> > > >
> > >
>
><LYR16486-99966-2000.08.02-00.01.23--ussailis#shaysnet.com@list
s.tapr.org>
> > > > >Message-ID:
> > > >
> > >
>
><LYR17222-100124-2000.08.02-20.44.13--venumadhavj#hotmail.com@l
ists.tapr.or
> g>
> > > > >List-Unsubscribe: <mailto:leave-ss-6751T@lists.tapr.org>
> > > > >List-Software: Lyris Server version 3.0
> > > > >List-Subscribe: <mailto:subscribe-ss@lists.tapr.org>
> > > > >List-Owner: <mailto:owner-ss@lists.tapr.org>
> > > > >X-List-Host: Tucson Amateur Packet Radio <http://www.tapr.org>
> > > > >X-Message-Id:
> > ><Pine.3.89.10008022139.A29751-0100000@equinox.shaysnet.com>
> > > > >Sender: bounce-ss-17222@lists.tapr.org
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> > > > >
> > > > >A comment on data rate & sensitivity / range.
> > > > >
> > > > >The trick to getting a very good range (for a fixed transmitter
> power)
> > >on a
> > > > >data system is to reduce the receiver bandwidth. The
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> > >changes
> > > > >by 10 Log (new bandwidth / previous bandwidth). Of
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> > > > >the bandwidth reduces the data rate. Nothing free.
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> > > > >does not reduce the receiver bandwidth. That is
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> the
> > >IF
> > > > >or video filters. Unless adaptive filters are employed.
> > > > >
> > > > >---
> > > > >
> > > > >Does anyone out there know where I can find a
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> > >loop
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> > > > >
> > > > >
> > > > >---W1EQO
> > > > >

> > > > >ussailis@shaysnet.com
> > > > >
> > > > >
> > > > >---
> > > > >You are currently subscribed to ss as: venumadhavj@hotmail.com
> > > > >To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
> > > > >
> > > >
> > > >
>
_____
> > > > Get Your Private, Free E-mail from MSN Hotmail at
> http://www.hotmail.com
> > > >
> > > >
> > > >
> > > >
> > > > ---
> > > >
> > > > END OF DIGEST
> > > >
> > > > ---
> > > > You are currently subscribed to ss as: ussailis@shaysnet.com
> > > > To unsubscribe send a blank email to
leave-ss-6751T@lists.tapr.org
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> > Get Your Private, Free E-mail from MSN Hotmail at
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> >
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> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: khs@ieee.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

19. [ss] Voice over IP

From: The Whiting Household <whitings@worldnet.att.net>
Date: Tue, 08 Aug 2000 16:40:57 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: cenescu@datek.ro (Catalin Enescu)
Message-ID: <LYR6751-101517-2000.08.08-18.16.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Catalin Enescu asked "I wonder if anybody has done any testing with VoIP
equipments over
Wireless LAN (11 MB units)."

Anyone contemplating this might be interested in Gilbert Held's book "Voice
& Data Internetworking," McGraw-Hill, 2000. This is a guide for
transporting real-time voice over networks designed for data transmission.

Cheers/ Rick W0TN

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] Re: Voice over IP

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Tue, 08 Aug 2000 22:32:39 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101545-2000.08.08-21.38.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I was at WAVE in Sarasota FL last weekend, amoung the other things
they showed us was a small box with 8 ports on it, into each port you
plugged a POTs (Plain Old Telephone) you could set it up to where
when one phone was taken off hook it would cause the corresponding
one to ring on the other end of a IP link, this case a SPEEDLAN set
up at 11mb. They have these things linked over wire and wireless links
all over the world. In fact they use the SPEEDLAN product to do a lot
of "last mile" links where wire or fibre is not economical. You could also
set this box up such that when you took your phone off hook it would
do the same on the other end, and of course that end was hooked to
a CO, and would return dialtone and allow the remote phone to dial
and also would send ring down to the remote phone. You could also
of course have the IP connection go into a PC which would act as a
PBX or CO and have the full path being IP rather than a mix of IP
and circuit switched.

So indeed there is at least a reasonable amount of VoIP being done
over such links.

On Wed, 02 Aug 2000 11:34:02 +0300, Catalin Enescu wrote:

>I wonder if anybody has done any testing with VoIP equipments over
>Wireless LAN (11 MB units).
>
>Catalin Enescu
>
>
>---
>You are currently subscribed to ss as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] Re: Voice over IP

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Tue, 8 Aug 2000 23:02:31 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101549-2000.08.08-22.09.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Don't hold us in suspense! Who makes it and what does it cost?

jeff   wa1hco
----- Original Message -----
From: "Chuck Hast" <kp4djt@tampabay.rr.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Tuesday, August 08, 2000 11:32 PM
Subject: [ss] Re: Voice over IP

> I was at WAVE in Sarasota FL last weekend, amoung the other things

> they showed us was a small box with 8 ports on it, into each port you
> plugged a POTs (Plain Old Telephone) you could set it up to where
> when one phone was taken off hook it would cause the corresponding
> one to ring on the other end of a IP link, this case a SPEEDLAN set
> up at 11mb. They have these things linked over wire and wireless links
> all over the world. In fact they use the SPEEDLAN product to do a lot
> of "last mile" links where wire or fibre is not economical. You could also
> set this box up such that when you took your phone off hook it would
> do the same on the other end, and of course that end was hooked to
> a CO, and would return dialtone and allow the remote phone to dial
> and also would send ring down to the remote phone. You could also
> of course have the IP connection go into a PC which would act as a
> PBX or CO and have the full path being IP rather than a mix of IP
> and circuit switched.
>
> So indeed there is at least a reasonable amount of VoIP being done
> over such links.
>
>
> On Wed, 02 Aug 2000 11:34:02 +0300, Catalin Enescu wrote:
>
> >I wonder if anybody has done any testing with VoIP equipments over
> >Wireless LAN (11 MB units).
> >
> >Catalin Enescu
> >
> >
> >---
> >You are currently subscribed to ss as: kp4djt@tampabay.rr.com
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
>
> Chuck Hast   e-mail   kp4djt@tampabay.rr.com
>
>   ---- FPAC ----
> www.qsl.net/fpac/
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] Re: ss digest: August 06, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Tue, 8 Aug 2000 23:37:49 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-101556-2000.08.08-22.43.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Jeff,

Thanks. Quite a different approach than I would have thought of. I'll
look at the references this weekend. I hope the one from Aachen is in
English :)

Jim, W1EQO

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] Re: Voice over IP

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Wed, 9 Aug 2000 02:40:43 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <carndt@slonet.org>
Message-ID: <LYR6751-101604-2000.08.09-01.48.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

done
----- Original Message -----

From: "Chris Arndt" <carndt@slonet.org>
To: <JEFF@WA1HCO.MV.COM>
Sent: Wednesday, August 09, 2000 12:57 AM
Subject: Re: [ss] Re: Voice over IP

> Jeff, could you please fwd this on to the list for me? I seem to be having
> trouble sending to it tonight.
>
> Thanks!
>
> Chris KD6DSI
>
> Another option is the Quicknet Internet Line Jack and Internet Phone jack,
> in ISA or PC card form factors. The Phone Jack has a POTS jack for a
phone,
> the Line Jack adds a port for a CO line. Either one accepts DTMF from the
> phone, and creates ring cycle on an incoming IP call to ring the phone.
>
> A Line Jack at one end and a Phone jack at the other with IP in the middle
> create a complete virtual circuit, or they can be used separately for
other
> IP telephony applications.
>
> ********** REPLY SEPARATOR **********
>
> On 8/8/00, at 7:34 PM, Chuck Hast wrote:
>
> >I was at WAVE in Sarasota FL last weekend, amoung the other things
> >they showed us was a small box with 8 ports on it, into each port you
> >plugged a POTs (Plain Old Telephone) you could set it up to where
> >when one phone was taken off hook it would cause the corresponding
> >one to ring on the other end of a IP link, this case a SPEEDLAN set
> >up at 11mb. They have these things linked over wire and wireless links
> >all over the world. In fact they use the SPEEDLAN product to do a lot
> >of "last mile" links where wire or fibre is not economical. You could
also
> >set this box up such that when you took your phone off hook it would
> >do the same on the other end, and of course that end was hooked to
> >a CO, and would return dialtone and allow the remote phone to dial
> >and also would send ring down to the remote phone. You could also
> >of course have the IP connection go into a PC which would act as a
> >PBX or CO and have the full path being IP rather than a mix of IP
> >and circuit switched.
> >
> >So indeed there is at least a reasonable amount of VoIP being done
> >over such links.
> >
> >
> >On Wed, 02 Aug 2000 11:34:02 +0300, Catalin Enescu wrote:
> >
> >>I wonder if anybody has done any testing with VoIP equipments over
> >>Wireless LAN (11 MB units).
> >>
> >>Catalin Enescu
> >>
> >>
> >>---
> >>You are currently subscribed to ss as: kp4djt@tampabay.rr.com
> >>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >>
> >
> >Chuck Hast   e-mail
kp4djt@tampabay.rr.com
> >
> >   ---- FPAC ----
> >www.qsl.net/fpac/
> >
> >
> >---
> >You are currently subscribed to ss as: carndt@slonet.org
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] Re: Voice over IP

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Wed, 9 Aug 2000 07:21:10 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101619-2000.08.09-06.32.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Go to www.speedlan.com
That is where I saw it. Actually I played with it while I was there.

By way these people appear to be interested in the amateur community.
I visited WAVE with a group of hams who are interested in SS locally.

> -----Original Message-----
> From: jeff millar [SMTP:jeff@wa1hco.mv.com]
> Sent: Tuesday, August 08, 2000 23:03
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Voice over IP
>
> Don't hold us in suspense! Who makes it and what does it cost?
>
> jeff   wa1hco
> ----- Original Message -----
> From: "Chuck Hast" <kp4djt@tampabay.rr.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Tuesday, August 08, 2000 11:32 PM
> Subject: [ss] Re: Voice over IP
>
>
> > I was at WAVE in Sarasota FL last weekend, amoung the other things
> > they showed us was a small box with 8 ports on it, into each port you
> > plugged a POTs (Plain Old Telephone) you could set it up to where
> > when one phone was taken off hook it would cause the corresponding
> > one to ring on the other end of a IP link, this case a SPEEDLAN set
> > up at 11mb. They have these things linked over wire and wireless links
> > all over the world. In fact they use the SPEEDLAN product to do a lot
> > of "last mile" links where wire or fibre is not economical. You could
> also
> > set this box up such that when you took your phone off hook it would
> > do the same on the other end, and of course that end was hooked to
> > a CO, and would return dialtone and allow the remote phone to dial
> > and also would send ring down to the remote phone. You could also
> > of course have the IP connection go into a PC which would act as a
> > PBX or CO and have the full path being IP rather than a mix of IP
> > and circuit switched.
> >
> > So indeed there is at least a reasonable amount of VoIP being done
> > over such links.
> >
> >
> > On Wed, 02 Aug 2000 11:34:02 +0300, Catalin Enescu wrote:
> >
> > >I wonder if anybody has done any testing with VoIP equipments over
> > >Wireless LAN (11 MB units).
> > >
> > >Catalin Enescu
> > >
> > >
> > >---
> > >You are currently subscribed to ss as: kp4djt@tampabay.rr.com
> > >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> > >
> >
> > Chuck Hast   e-mail
> kp4djt@tampabay.rr.com
> >
> >   ---- FPAC ----
> > www.qsl.net/fpac/
> >
> >
> > ---
> > You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>

> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] RE: Voice over IP

From: adesjard@cme.com
Date: Wed, 9 Aug 2000 06:31:31 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101620-2000.08.09-06.38.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just an addition to this thread -

Cisco - since the takeover of Aironet - has been working on adding QOS flags for VOIP on 802.11b gear. Symbol has been doing this for nearly 2 years now.

Alan DesJardins N5VXL
RF Network Engineer
Chicago Mercantile Exchange
Technology Division / Network Operations
30 S. Wacker Drive
Chicago, IL 60606
312-338-2853
adesjard@cme.com

-----Original Message-----
From: bounce-ss-12965@lists.tapr.org
[mailto:bounce-ss-12965@lists.tapr.org]On Behalf Of The Whiting Household
Sent: Tuesday, August 08, 2000 4:41 PM
To: TAPR Spread Spectrum Special Interest Group
Cc: Catalin Enescu
Subject: [ss] Voice over IP

Catalin Enescu asked "I wonder if anybody has done any testing with VoIP equipments over
Wireless LAN (11 MB units)."

Anyone contemplating this might be interested in Gilbert Held's book "Voice & Data Internetworking," McGraw-Hill, 2000. This is a guide for transporting real-time voice over networks designed for data transmission.

Cheers/ Rick W0TN

You are currently subscribed to ss as: adesjard@cme.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] Re: dsss pn codes(paul)

From: <rv9j@virgilio.it>
Date: Thu, 10 Aug 2000 23:09:23 +0430
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-101959-2000.08.10-13.45.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>
> Hello,
> I plan to use a pn code with 16 bit shift register, I was wondering if
> someone can give me the feedback tap points for a m-length code.
> Thank you
> Avraham Kurtz
>
>
> ---
> You are currently subscribed to ss as: RV9J@VIRGILIO.IT

> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
> please let me know if you 've received my last mail that showed
the polinomio to use in a PN RANDOM GEN!
i'll await yr reply
regards
paul

RV9J@VIRGILIO.IT

Virgilio Mail - Il tuo indirizzo E-mail gratis
http://mail.virgilio.it

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: ss digest: August 09, 2000

From: "Robert Alred" <alred@mindspring.com>
Date: Thu, 10 Aug 2000 21:17:07 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-102026-2000.08.10-20.09.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The 802.11 Committee is working on adding multimedia QOS into the standard this is being pushed by both symbol and Cisco. Lucent has mostly seemed to drop out of the committee with the retirement of Vic. VOIP does run fine today on 802.11 as long as you over engineer the system. Larger file activity will mess with your voice quality. 802.11 adds to the delay because of its listen before transmit and backoff routines. VOIP can only take less than 150 ms overall delay for toll quality of course we are used to talking half-duplex so we can take more delay. Jitter is another major concern with any voice over data technology, but more so with wireless because the above mentioned problems. Jitter is when the delay between packets changes. 50 ms is usually the limit of jitter delay. Jitters biggest enemy is larger MTU sizes. Currently Symbol and spectralink make voice over 802.11 technology. Symbols phone is only released on their frequency hopper at this time. Look for an 802.11b next year. Symbols phone is also an H.323 phone that runs g.711 and g.729 codecs. The spectralink phone runs a proprietary protocol to their own gateway meant to interface into PBX's at corporate locations. Spectralink has their own quality of service that many vendors are adding to their AP's.
For single VOIP calls over 802.11 that do not have to compete with data you will be fine. I have done several test using Netmeeting over this type of link. If you are going to run over the Internet no QOS will help once you are off the wireless net work. You should strive to keep Delay, jitter and packet loss to a minimum.

Robert

Ralred@mindspring.com
N1PDR

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] Idle or Dead

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 22 Aug 2000 08:29:49 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104196-2000.08.22-07.36.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Did something happen? This list got very quiet.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: Idle or Dead

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Tue, 22 Aug 2000 22:40:59 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104200-2000.08.22-07.47.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Aug 22, 2000 at 08:29:49AM -0400, Hast, Chuck wrote:
> Did something happen? This list got very quiet.

It has been quiet.

Here's an ugly and illegal but amusing idea I've been thinking about.
Modern radios have good frequency synthesis and computer control.
Similarly, we can synchronise our computer clocks very precisely
using ntp (network time protocol).

Could we write a program which would basically frequency hop over
a selected band at say 1 hop or 2 hops per second?

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

30. [ss] Re: Idle or Dead

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 22 Aug 2000 09:30:26 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104204-2000.08.22-08.37.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I would love to do that on the 2m band. Jump from guard band to
guard band between the useless repeaters around here. Better
yet, somehow look ahead and jump to idle repeater channels!
Now that is real spectrum re-use.

I still believe that if we do not start looking at new technology,
sooner or later the buzzards are going to come home to roost,
and we are going to find our hobby without bandwidth to do
anything new. Look at what was paid for spectrum in Germany
last week, I think it was US$ 3.3 BILLION. Just think how happy
they would be to get our bits and pieces of spectrum?!?!?

> -----Original Message-----
> From: Hamish Moffatt [SMTP:hamish@cloud.net.au]
> Sent: Tuesday, August 22, 2000 08:41
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Idle or Dead
>
> On Tue, Aug 22, 2000 at 08:29:49AM -0400, Hast, Chuck wrote:
> > Did something happen? This list got very quiet.
>
> It has been quiet.
>
> Here's an ugly and illegal but amusing idea I've been thinking about.
> Modern radios have good frequency synthesis and computer control.
> Similarly, we can synchronise our computer clocks very precisely
> using ntp (network time protocol).
>
> Could we write a program which would basically frequency hop over
> a selected band at say 1 hop or 2 hops per second?
>
>
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

31. [ss] Re: Idle or Dead

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 23 Aug 2000 00:05:01 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104210-2000.08.22-09.11.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Aug 22, 2000 at 09:30:26AM -0400, Hast, Chuck wrote:
> I would love to do that on the 2m band. Jump from guard band to
> guard band between the useless repeaters around here. Better
> yet, somehow look ahead and jump to idle repeater channels!
> Now that is real spectrum re-use.

Well, I suppose we could be legal and do it on 70cm; I was thinking
of just going for it on 10 metres. Plenty of bandwidth and no one
would ever notice, especially here in VK. I'm just not sure that
the clock synchronisation using ntp is accurate enough to get
good speech flow across hops. GPS synchronisation might be required.

> last week, I think it was US$ 3.3 BILLION. Just think how happy
> they would be to get our bits and pieces of spectrum?!?!?

Many billions were spent in the UK recently on 3G wireless licenses.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

32. [ss] Re: Idle or Dead

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Tue, 22 Aug 2000 10:29:41 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104212-2000.08.22-09.36.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I would use GPS, then you can have a unit that you can walk around
with and travel, not having to worry about keeping a IP link to get synch

Yes the UK one was a real blaster too, then there were the auctions in
this country, if we do not think they would like to have our spectrum we
are deluded.

> -----Original Message-----
> From: Hamish Moffatt [SMTP:hamish@cloud.net.au]
> Sent: Tuesday, August 22, 2000 10:05
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Idle or Dead
>
>
> Well, I suppose we could be legal and do it on 70cm; I was thinking
> of just going for it on 10 metres. Plenty of bandwidth and no one
> would ever notice, especially here in VK. I'm just not sure that
> the clock synchronisation using ntp is accurate enough to get
> good speech flow across hops. GPS synchronisation might be required.
>
>
>
> Many billions were spent in the UK recently on 3G wireless licenses.
>
>
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] "new" modulation technique VMSK/2

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Tue, 22 Aug 2000 14:00:55 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104263-2000.08.22-13.07.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm

how real is this? if it is real, we could do 300k bits/sec in the same
bandwidth as currently used with today's packet radio.

--- eric

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

34. [ss] Re: "new" modulation technique VMSK/2

From: Jake Brodsky <frussle@erols.com>
Date: Tue, 22 Aug 2000 14:53:06 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104273-2000.08.22-14.00.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 22 Aug 2000 14:00:55 -0400, you wrote:

>http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm
>
>how real is this? if it is real, we could do 300k bits/sec in the same
>bandwidth as currently used with today's packet radio.

It's real. The only part of the story they haven't reported is that
you'll need a very good signal to noise ratio to use this technique.
I guess they assume you'd know that.

No matter what they say, you can't get away from Shannon's law.
(Though I have seen some very creative work-arounds...)

Jake Brodsky, mailto:frussle@erols.com
"Nearly fifty percent of all graduates came from
the bottom half of the class."

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] Re: "new" modulation technique VMSK/2

From: karel <karel@worldcom.nl>
Date: Tue, 22 Aug 2000 03:37:01 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104288-2000.08.22-14.59.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Do you think that VMSK modulation would also work on shortwave?
I have been looking for systems that would be capable to transmit 14k4 or
better 28k8 on shortwave.
I'am currently working on 2 projects for ALRED, a latin-american
educational radio network. Some radio are so far away that no other
solution is practical without shortwave. Analoge shortwave is not good
enough for radio distribution.
ALRED uses PAS-3 as a distribution channel as a backchannel, to let
participate the radio stations (non-commercial) we use internet, but as a
wrote not all have the possiblity. Using satelite channels to do so would
be to expensive.
greetings
Karel Fassotte
HC-PE2KFA

At 02:53 PM 8/22/00 -0400, you wrote:
>On Tue, 22 Aug 2000 14:00:55 -0400, you wrote:
>
>>http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm
>>
>>how real is this? if it is real, we could do 300k bits/sec in the same
>>bandwidth as currently used with today's packet radio.
>

>It's real. The only part of the story they haven't reported is that
>you'll need a very good signal to noise ratio to use this technique.
>I guess they assume you'd know that.
>
>No matter what they say, you can't get away from Shannon's law.
>(Though I have seen some very creative work-arounds...)
>
>Jake Brodsky, mailto:frussle@erols.com
>"Nearly fifty percent of all graduates came from
>the bottom half of the class."
>
>---
>You are currently subscribed to ss as: karel@worldcom.nl
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] Re: "new" modulation technique VMSK/2

From: Jake Brodsky <frussle@erols.com>
Date: Tue, 22 Aug 2000 16:13:02 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104302-2000.08.22-15.21.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 22 Aug 2000 03:37:01 -0500, you wrote:

>Do you think that VMSK modulation would also work on shortwave?

According to the article this sort of thing is still very much in
development. It appears that the writer thinks one application could
be on MW.

>I have been looking for systems that would be capable to transmit 14k4 or
>better 28k8 on shortwave.

The problems are endless. It's not just a matter of receiver dynamic
range, there is also selective fading (multipath), interference,
static noise, and by the way, how are you going to get that signal to
noise ratio unless you have a very clean transmitter?

>I'am currently working on 2 projects for ALRED, a latin-american
>educational radio network. Some radio are so far away that no other
>solution is practical without shortwave. Analoge shortwave is not good
>enough for radio distribution.
>ALRED uses PAS-3 as a distribution channel as a backchannel, to let
>participate the radio stations (non-commercial) we use internet, but as a
>wrote not all have the possiblity. Using satelite channels to do so would
>be to expensive.

Expensive? Compared to what? I don't envision VMSK/2 becoming
"cheap" any time soon. In any case, I'll reiterate: It still seems to
be very much in development.

When the real product emerges from the mist of vaporware, I'll look
harder...

Jake Brodsky, mailto:frussle@erols.com
"Nearly fifty percent of all graduates came from
the bottom half of the class."

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

37. [ss] Re: "new" modulation technique VMSK/2

From: Jeffrey Austen <jausten@tntech.edu>
Date: Tue, 22 Aug 2000 15:58:54 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104317-2000.08.22-16.08.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm
>
>how real is this? if it is real, we could do 300k bits/sec in the same
>bandwidth as currently used with today's packet radio.

It's not, at least at the high spectral efficiencies which are claimed.
According to Shannon's theorem for 19 bps/Hz the SNR needs to be 57 dB.
This might be achievable on a telephone line under near ideal conditions.
However, for 90 bps/Hz it needs to be 271 dB, which would require an absurd
amount of power (over a factor of 10^20 (10 to the power 20) more than the
previous case!).

There are several other rather absurd points in the article. Among them are
that baseband filtering is more difficult (or impossible) than passband
filtering and that narrowband phase modulation has zero bandwidth.

Jeff, k9ja

Jeffrey Austen | Tennessee Technological University
jausten@tntech.edu | Box 5004
+1-931-372-3485 | Cookeville Tennessee 38505 U.S.A.

You are currently subscribed to ss as: lyris.ss@tapr.org
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38. [ss] Re: "new" modulation technique VMSK/2

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Tue, 22 Aug 2000 17:26:59 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104322-2000.08.22-16.34.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 02:53 PM 8/22/2000 -0400, you wrote:
>On Tue, 22 Aug 2000 14:00:55 -0400, you wrote:
>
> >http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm
> >
> >how real is this? if it is real, we could do 300k bits/sec in the same
> >bandwidth as currently used with today's packet radio.
>
>It's real. The only part of the story they haven't reported is that
>you'll need a very good signal to noise ratio to use this technique.
>I guess they assume you'd know that.

well actually, I wouldn't know that because I'm not RF literate
enough. Anyway, what struck me was that it seemed to be extremely
sensitive to multipath type symbol smearing. this is, of course, assuming
I understood the diagrams I was reading. like the various QAM modulation
schemes, I suspect this one will be mostly used on wires and not
Wireless. although, slowing down the symbol rate from 90b/hz to 30b/hz
might make practical for amateur radio. You must admit that moving to
50-100 kbits per second in 4 kHz bandwidth would be amusing and somewhat
more high-tech than the current packet scene.

>No matter what they say, you can't get away from Shannon's law.
>(Though I have seen some very creative work-arounds...)

laws were meant to be broken ;-)

---eric

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

39. [ss] Re: "new" modulation technique VMSK/2

From: Dale Heatherington <dale@wa4dsy.net>
Date: Tue, 22 Aug 2000 20:28:52 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104354-2000.08.22-19.45.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This smells like a scam to me.
They even claim it works with 7db carrier to noise, not 271 db!

>From http://www.networkalpha.com/index2.html :

VMSK ideally operates at below 7.0 dB Carrier to Noise Ratio (CNR) for an acceptable bit (digital) error

rate, so an additional 18 dB of line loss can be tolerated. The bandwidth efficiency is much greater;
this results in
an additional gain in signal/noise ratio. The secret to VMSK's success lies in its very
narrow-to-trivial bandwidth. In
conclusion the VMSK provides a far better solution for solving the wire line bandwidth problem.

Do some searches on AlphaCom and VMSK
and see what else you get. Here's a sample :

Join The VMSK Technology Revolution!!
An Incredible High Speed Bandwidth Technology called VMSK is about to explode on the world
of telecommunications and YOU can be a part of it. Join me as an independent distributor for
AlphaCom Communications as they introduce this revolutionary and patented technology to
the world. Click on the link to learn more OR get left behind in the World Wide Wait!!
 Website:AlphaCom Opportunity

On Tue, 22 Aug 2000, Jeffrey Austen wrote:
> >http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm
> >
> >how real is this? if it is real, we could do 300k bits/sec in the same
> >bandwidth as currently used with today's packet radio.
>
> It's not, at least at the high spectral efficiencies which are claimed.
> According to Shannon's theorem for 19 bps/Hz the SNR needs to be 57 dB.
> This might be achievable on a telephone line under near ideal conditions.
> However, for 90 bps/Hz it needs to be 271 dB, which would require an absurd
> amount of power (over a factor of 10^20 (10 to the power 20) more than the
> previous case!).
>
> There are several other rather absurd points in the article. Among them are
> that baseband filtering is more difficult (or impossible) than passband
> filtering and that narrowband phase modulation has zero bandwidth.
>
> Jeff, k9ja
>
> ---
> Jeffrey Austen | Tennessee Technological University
> jausten@tntech.edu | Box 5004
> +1-931-372-3485 | Cookeville Tennessee 38505   U.S.A.
>
>
>
> ---
> You are currently subscribed to ss as: ss@wa4dsy.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
--
Dale Heatherington
dale@wa4dsy.net
Web Page http://www.wa4dsy.net
Sent by KMail for Linux

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

40. [ss] Re: "new" modulation technique VMSK/2

From: "KF6QDP" <kf6qdp@amsat.org>
Date: Tue, 22 Aug 2000 18:05:30 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-104366-2000.08.22-20.19.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Karel,

9k6 and 19k2 "non-compressed" data modes do exist on HF. Both MS-188-110B
and STANAG5066 describe them. We have been running tests using 9k6 bps (SSB)
and 19k2 bps (2-ISB). These modems are presently "costly" but you know
what... even the "big guys" are using sound card based modems for this now
;-)   They use modes like 64QAM and the higher data rates do require
near-perfect HF channels ;-)

We have many systems running CLOVER-2000 modems with "perceived" throughputs
in the 5k-6kbps range (adaptive compression algorithms). -

Check-out "WaveScience" (http://www.wavescience.com) and Rockwell-Collins
(Q9600 modem)

Bruno Haineault, KF6QDP/VE2EQ
Oceanside, California

----- Original Message -----
From: "karel" <karel@worldcom.nl>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Tuesday, August 22, 2000 01:37
Subject: [ss] Re: "new" modulation technique VMSK/2

> Do you think that VMSK modulation would also work on shortwave?
> I have been looking for systems that would be capable to transmit 14k4 or
> better 28k8 on shortwave.
> I'am currently working on 2 projects for ALRED, a latin-american
> educational radio network. Some radio are so far away that no other
> solution is practical without shortwave. Analoge shortwave is not good
> enough for radio distribution.
> ALRED uses PAS-3 as a distribution channel as a backchannel, to let
> participate the radio stations (non-commercial) we use internet, but as a
> wrote not all have the possiblity. Using satelite channels to do so would
> be to expensive.
> greetings
> Karel Fassotte
> HC-PE2KFA

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

41. [ss] Re: "new" modulation technique VMSK/2

From: karel <karel@worldcom.nl>
Date: Fri, 25 Aug 2000 08:34:01 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105223-2000.08.26-08.32.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes Bruno
I all ready have information from collins,Harris,Marauder about there
product line in mil spec modems.
You write even the big guys use sound cards. Do these solutions also comply
with the mil spec.?
We also have some experience with clover 2000. However the troughput we
percieved wase al little bit less than 2Kb.
Could you give me some information where to look for the sound card
solutions. Wich software do they use?
Perhaps you can give me some info to get the picture clear.

Normaly we would not use more than 1 hop with good radio links.
Thanks Karel

At 06:05 PM 8/22/00 -0700, you wrote:
>Karel,
>
>9k6 and 19k2 "non-compressed" data modes do exist on HF. Both MS-188-110B
>and STANAG5066 describe them. We have been running tests using 9k6 bps (SSB)
>and 19k2 bps (2-ISB). These modems are presently "costly" but you know
>what... even the "big guys" are using sound card based modems for this now
>;-)   They use modes like 64QAM and the higher data rates do require
>near-perfect HF channels ;-)
>
>We have many systems running CLOVER-2000 modems with "perceived" throughputs
>in the 5k-6kbps range (adaptive compression algorithms). -
>
>Check-out "WaveScience" (http://www.wavescience.com) and Rockwell-Collins
>(Q9600 modem)
>
>Bruno Haineault, KF6QDP/VE2EQ
>Oceanside, California

>
>
>----- Original Message -----
>From: "karel" <karel@worldcom.nl>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Sent: Tuesday, August 22, 2000 01:37
>Subject: [ss] Re: "new" modulation technique VMSK/2
>
>
>> Do you think that VMSK modulation would also work on shortwave?
>> I have been looking for systems that would be capable to transmit 14k4 or
>> better 28k8 on shortwave.
>> I'am currently working on 2 projects for ALRED, a latin-american
>> educational radio network. Some radio are so far away that no other
>> solution is practical without shortwave. Analoge shortwave is not good
>> enough for radio distribution.
>> ALRED uses PAS-3 as a distribution channel as a backchannel, to let
>> participate the radio stations (non-commercial) we use internet, but as a
>> wrote not all have the possiblity. Using satelite channels to do so would
>> be to expensive.
>> greetings
>> Karel Fassotte
>> HC-PE2KFA
>
>
>
>
>---
>You are currently subscribed to ss as: karel@worldcom.nl
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

42. [ss] Re: "new" modulation technique VMSK/2

From: karel <karel@worldcom.nl>
Date: Fri, 25 Aug 2000 09:02:14 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105232-2000.08.26-09.03.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Jack

I have allready some information about the mil spec modem of Collins,
Harris and Wavescience. They comply with the mil std-188-110a and b
stanag 4285 and 4529 ect.
Using ISB Collins says it will transmit up to 28k8. However if there are
new modes that are more effecient and fast. I' am very interested.
However these modems are not very cheap. Harris modems sell for about 5000
dollar, the software also 5000 dollar.
The radio stations members of Aler do not have a commercial goal. So we
have to select the best and cheapest solutions.

You write expensive, compared to what?
Well Vsat terminals sell for about 10,000 US dollar, not including the
operational costs.

The theoritacal basics of VMSK look all right. What I dont know is the
experience in the real world.
If we could get our hands on a reliable product that would do the job
within the budget or the ALRED members it would mean a break through for
emerging projects of ALER and other human rights organisations.

We did a lot of experimentations with analog links on shortwave and they
look very promising.
We also used clover 2000 in a project in the republic of Congo. That worked
fine for mail, even at far distances, several thousands kilometers.
The real troughput of the system however is not enough for what we need now.
We would like to send compressed audiofiles as attachments to mails. The
vocoder compression software we now use is very effective and sounds
natural. If it would be possible we would like to use realtime digital
voice systems. But because we don't work for big companies, the budget is
limmited and we have to look for the technical most advanced and cost
effective solutions.

The efforts made by Digital Radio Mondial (DRM) and US Digital Radio to get

digital MW and Sortwave are very promissing. However they use bandwith for
broadcast purpose. Using Mpeg-4 and andvanced digital modulation they get
22Kb over the air.

Because the digital modulators are for the broadcast market, they will not
be very cheap.

If one of you has some more ideas, please write!
Karel
At 04:13 PM 8/22/00 -0400, you wrote:
>On Tue, 22 Aug 2000 03:37:01 -0500, you wrote:
>
>>Do you think that VMSK modulation would also work on shortwave?
>
>According to the article this sort of thing is still very much in
>development. It appears that the writer thinks one application could
>be on MW.
>
>>I have been looking for systems that would be capable to transmit 14k4 or
>>better 28k8 on shortwave.
>
>The problems are endless. It's not just a matter of receiver dynamic
>range, there is also selective fading (multipath), interference,
>static noise, and by the way, how are you going to get that signal to
>noise ratio unless you have a very clean transmitter?
>
>>I'am currently working on 2 projects for ALRED, a latin-american
>>educational radio network. Some radio are so far away that no other
>>solution is practical without shortwave. Analoge shortwave is not good
>>enough for radio distribution.
>>ALRED uses PAS-3 as a distribution channel as a backchannel, to let
>>participate the radio stations (non-commercial) we use internet, but as a
>>wrote not all have the possiblity. Using satelite channels to do so would
>>be to expensive.
>
>Expensive? Compared to what? I don't envision VMSK/2 becoming
>"cheap" any time soon. In any case, I'll reiterate: It still seems to
>be very much in development.
>
>When the real product emerges from the mist of vaporware, I'll look
>harder...
>
>Jake Brodsky, mailto:frussle@erols.com
>"Nearly fifty percent of all graduates came from
>the bottom half of the class."
>
>---
>You are currently subscribed to ss as: karel@worldcom.nl
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

43. [ss] Re: "new" modulation technique VMSK/2

From: Brett Glass <brett@lariat.org>
Date: Sat, 26 Aug 2000 16:56:23 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105293-2000.08.26-18.03.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 12:00 PM 8/22/2000, Eric S. Johansson wrote:

>http://www.ednmag.com/ednmag/reg/2000/08172000/17hiw.htm
>
>how real is this?

It looks real but not necessarily that reliable in practice.
It relies on EXTREMELY tight timing of the zero crossings in
the signal -- similar to what's being done on hard drives
nowadays. (There are, and always have been, a lot of
similarities between modulation schemes for magnetic
recording and those used for RF applications.) Noise or
phase distortion could really mess up such a modulation
scheme.

--Brett

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

44. [ss] Re: "new" modulation technique VMSK/2

From: Jake Brodsky <frussle@erols.com>
Date: Tue, 22 Aug 2000 16:13:02 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105297-2000.08.26-18.45.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, 22 Aug 2000 03:37:01 -0500, you wrote:

>Do you think that VMSK modulation would also work on shortwave?

According to the article this sort of thing is still very much in
development. It appears that the writer thinks one application could
be on MW.

>I have been looking for systems that would be capable to transmit 14k4 or
>better 28k8 on shortwave.

The problems are endless. It's not just a matter of receiver dynamic
range, there is also selective fading (multipath), interference,
static noise, and by the way, how are you going to get that signal to
noise ratio unless you have a very clean transmitter?

>I'am currently working on 2 projects for ALRED, a latin-american
>educational radio network. Some radio are so far away that no other
>solution is practical without shortwave. Analoge shortwave is not good
>enough for radio distribution.
>ALRED uses PAS-3 as a distribution channel as a backchannel, to let
>participate the radio stations (non-commercial) we use internet, but as a
>wrote not all have the possiblity. Using satelite channels to do so would
>be to expensive.

Expensive? Compared to what? I don't envision VMSK/2 becoming
"cheap" any time soon. In any case, I'll reiterate: It still seems to
be very much in development.

When the real product emerges from the mist of vaporware, I'll look
harder...

Jake Brodsky, mailto:frussle@erols.com
"Nearly fifty percent of all graduates came from
the bottom half of the class."

You are currently subscribed to ss as: tlang@freeway.apana.org.au
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

45. [ss] ANNOUNCEMENT: ARRL/TAPR 19th Annual DCC Sep. 22-24

From: "Steven R. Bible" <srbible@gate.net>
Date: Mon, 28 Aug 2000 10:23:35 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105590-2000.08.28-09.31.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Notice:
September 1, 2000 is the last day to receive the special hotel room rate of
$89/night single or double and the pre-registration price for the
conference.

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information

Mark your calendar and start making plans to attend the year's premier event in digital communications. The 19th Annual ARRL and TAPR Digital Communications Conference will be held September 22-24, 2000, in Orlando, Florida - just minutes from the Orlando International Airport.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant and Synergy Systems LLC has donated two M12 development kits and many more.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be:
Lake Monroe Amateur Radio Society
(http://www.qsl.net/lmars/),
Orange County ARES/RACES
(http://evcom.net/~jvoisin/ares.htm),
Seminole County ARES/RACES
(http://wwww.geocities.com/capecanaveral/launchpad/4773),
and Orlando Amateur Radio Club
(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Hotel
Conference presentations, meetings, and seminars will be held at the Orlando

Airport Marriott. It is highly recommended that you book your room prior to arriving. A special DCC room rate of $89/single and $89/double per night has been blocked for 50 rooms and is available until September 1st, 2000. Once the 50 rooms have been reserved, room rates will increase. So be sure to book your rooms early! The hotel provides transportation to and from the Orlando International Airport. Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
- TAPR Membership Meeting
- An event at which the most important new developments in amateur digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

There are few activities where your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! A get-together with colleagues and bringing each other up to date on your latest work -- all this, and more, for an unforgettable weekend of amateur radio and digital communications. We hope to see you at the ARRL and TAPR Digital Communications Conference on September 22-24, 2000!

Full information on the conference and hotel information can be obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or Internet: http://www.tapr.org and tapr@tapr.org to register or for additional information.

Conference Registration includes: Conference Proceedings, Sessions, Meetings, and Lunch on Saturday.

- Pre-Registration (before Sept 1st)

$45.00 _____

- Registration (after Sept 1) or at door

$55.00 _____

- Saturday Evening Dinner (Limited Space)
Dinner with Guest Speaker
Prize Drawing

$30.00 _____

Symposia/Seminars

- 4th Annual APRS National Symposium
Friday, 1pm - 7pm. $25.00 _____

- Sunday Seminar
PIC Design, Development, and Programming

Sunday, 8:30 am - 2 pm. $20.00 _____

TOTAL _____

Name/Call:

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Country:

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Charge my credit card (circle one):

VISA MasterCard

Acct:

Expiration Date:

Signature on card:

Mail completed registration form with check to:
TAPR
8987-309 E Tanque Verde Rd #3378
Tucson, AZ 85749-9399

Or check http://www.tapr.org/dcc for an on-line registration form.

A registration packet will be mailed in September upon receipt of
registration form and payment.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

46. [ss] Re: "new" modulation technique VMSK/2

From: Phil Karn <karn@ka9q.net>
Date: Tue, 29 Aug 2000 01:09:24 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105884-2000.08.29-03.16.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>This smells like a scam to me.

Absolutely. VMSK is a 100% pure scam. The only thing I can't decide is
whether they're honestly deluding themselves, or if they're
consciously out to scam everybody. The multilevel marketing scheme
Dale cites (I found it too) doesn't bode well for the "don't attribute
to malice that which can be adequately explained by stupidity" rule.

I sent off a critical letter to the author of the EDN article, and I
clearly struck a nerve. He also forwarded my letter to the "inventor"
of VMSK/2, who responded similarly.

What's funny (as in strange, not humorous) is that this scheme is
nearly identical to that described in an article printed in 73
Magazine (that bastion of peer-reviewed technical excellence) in the
early 1990s, as I recall.

At the time I posted a review of this scheme. I showed that it may
well have succeeded in creating a signal with zero occupied bandwidth
according to the legal FCC part 97 definition of that term.

How? Simple. A binary-modulated PM signal with a deviation of less
than +/- 90 degrees will have residual carrier. If you simply decrease
the deviation to a very low amount, which is all these schemes do, you
are left with most of your transmitter power in the carrier and very
little in the sidebands.

Now look at the FCC definition of occupied bandwidth in part
97.3(a)(8):

> Bandwidth. The width of a frequency band outside of which the mean
> power of the transmitted signal is attenuated at least 26 dB
> below the mean power of the transmitted signal within the band.

26 dB is a power ratio of 400:1, so this means that the legal
bandwidth is that which contains 399/400ths of the total emission.

Let's say we phase modulate +/- 0.05 radians. The carrier amplitude
will be cos(0.05), which is approximately 1. The sideband amplitude
will be sin(0.05), which is approximately 0.05. This corresponds to
a sideband power of 20log10(0.05) = -26 dB relative to the carrier.

See what happened? The sidebands are now so weak as to be excluded
from the bandwidth definition, so our signal bandwidth is now legally
zero!

Of course, this is just a legal fiction. The sidebands are still
there, and if you remove or interfere with them, the signal can no
longer be demodulated.

The VMSK scam is exactly the same. They show spectrum analyzer
displays with a single narrow carrier spike. The all-essential
sidebands are lost in the noise. Worse, you've wasted most of your
power on a useless carrier, so you now need 26 dB more signal to
perform as well as suppressed-carrier BPSK.

Phil

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47. [ss] Re: "new" modulation technique VMSK/2

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Tue, 29 Aug 2000 06:57:24 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-105933-2000.08.29-09.05.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil,

On the other hand, maybe a pure carrier carries enough about the
"intelligence" being conveyed to... ah, but I'm being judgmental :-)

Enjoy!

Lyle

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48. [ss] Re: "new" modulation technique VMSK/2

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Wed, 30 Aug 2000 23:43:09 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106477-2000.08.30-17.50.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>This smells like a scam to me.

Hello fellow HAMS,

    I´ve been monitoring this thread of messages, because I have a particular interest
in VMSK.

    Personally I do not know if it is a scam on not on the business side of things, but
on the technical side I do believe it is not. Although I do not have the technical
resources to built a full-on VMSK radio, I have implemented some of it's ideas in a
diversity of projects.

    I have used the concept in projects from high speed binary communication over single
wire to high speed IR communications. What I can tell you, is it does work on the levels
that I have used it. The concepts are not a scam.

    I have known about VPSK, VMSK and VMSK/2 for more than 2 years, and have been using
some of its concepts for over a year. I agree that I had some difficulty in the

beginning, while trying to implement it, due to the, then narrow minded way of looking at things. Once I began to get into a new way of thought I began to overcome the difficulties.

One of the things I discovered, is that in order to gain the high speed at narrow bandwidth, I had it increase the resolution of the bit or wave sampling (I prefer to work with PIC uC tools instead of pure gates) in order to achieve the high speeds. I had to tweak the use of the PIC and use PWM and CCP capture to achieve the high resolution, instead of gates or high speed ADC and DAC.

Also, you cannot just inject VMSK into your 3kHz Audio Mic input on your Radio. VMSK has to be mixed with your RF carrier which has be offset and side-band filtered. VMSK works in a way similar to AM. You could maybe pre-mix the VMSK in order to lower the centre frequency and then inject it into you Mic Port, but I have not yet had the time to test this theory. I probably will soon, just to prove the point.

I suggest that you people stop attacking things just because you don't understand it. Be humble at first, by experimenting with it seriously, before throwing it aside. You always draw knowledge from it - even if it is not as good as you thought.

Don't just be a seagull - be a Jonathon Livingston Seagull (for those that really understand what this is!)

Fernando Carreiro - ZS6BLF (fmi@carreiro)

PS! My thanks to Marcelo Puhl who first brought VMSK to my attention some years back.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

49. [ss] Re: "new" modulation technique VMSK/2

From: Dale Heatherington <dale@wa4dsy.net>
Date: Wed, 30 Aug 2000 19:39:45 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106497-2000.08.30-19.16.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, 30 Aug 2000, Fernando M. I. Carreiro wrote:

> One of the things I discovered, is that in order to gain the high speed at narrow
> bandwidth, I had it increase the resolution of the bit or wave sampling (I prefer to
> work with PIC uC tools instead of pure gates) in order to achieve the high speeds. I had
> to tweak the use of the PIC and use PWM and CCP capture to achieve the high resolution,
> instead of gates or high speed ADC and DAC.
>
> Also, you cannot just inject VMSK into your 3kHz Audio Mic input on your Radio. VMSK
> has to be mixed with your RF carrier which has be offset and side-band filtered. VMSK
> works in a way similar to AM. You could maybe pre-mix the VMSK in order to lower the
> centre frequency and then inject it into you Mic Port, but I have not yet had the time
> to test this theory. I probably will soon, just to prove the point.

I'm looking forwared to seeing the point proved.

I'd like to know what happens when you add some noise to
the VMSK signal traveling on your wire. It seems to me that if you need very precise resolution in the sampling of the received signal , a small amount of noise would corrupt it. Real world applications will have noise. Find out the minumum carrier to noise ratio to successfully recover data.

I'd also like to know what happens if you run the VMSK signal through a very narrow high order band pass filter. If the VMSK signals bandwidth is really smaller than the filter bandwidth it should come out the other end unchanged. Real world applications will have bandwidth limits. Find out what minimum bandwidth filter is required to successfully pass a given data rate.

>
> I suggest that you people stop attacking things just because you don't understand
> it. Be humble at first, by experimenting with it seriously, before throwing it aside.
> You always draw knowledge from it - even if it is not as good as you thought.

Extraordinary claims require extraordinary proof
and the burden of proof is on he who makes the claim.

I'd like to see some proof or even some credible evidence.
Show me!

--
Dale Heatherington
dale@wa4dsy.net
Web Page http://www.wa4dsy.net
Sent by KMail for Linux

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50. [ss] Re: "new" modulation technique VMSK/2

From: Jim Sanford <wb4gcs@home.com>
Date: Wed, 30 Aug 2000 20:38:06 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106503-2000.08.30-19.44.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil:
Thanks for confirming my instincts when I read the EDN article. Glad I didn't
waste any time researching it.

73,
Jim
wb4gcs@amsat.org

Phil Karn wrote:

> >This smells like a scam to me.
>
> Absolutely. VMSK is a 100% pure scam. The only thing I can't decide is
> whether they're honestly deluding themselves, or if they're
> consciously out to scam everybody. The multilevel marketing scheme
> Dale cites (I found it too) doesn't bode well for the "don't attribute
> to malice that which can be adequately explained by stupidity" rule.
>
> I sent off a critical letter to the author of the EDN article, and I
> clearly struck a nerve. He also forwarded my letter to the "inventor"
> of VMSK/2, who responded similarly.
>
> What's funny (as in strange, not humorous) is that this scheme is
> nearly identical to that described in an article printed in 73
> Magazine (that bastion of peer-reviewed technical excellence) in the
> early 1990s, as I recall.
>
> At the time I posted a review of this scheme. I showed that it may
> well have succeeded in creating a signal with zero occupied bandwidth
> according to the legal FCC part 97 definition of that term.
>
> How? Simple. A binary-modulated PM signal with a deviation of less
> than +/- 90 degrees will have residual carrier. If you simply decrease
> the deviation to a very low amount, which is all these schemes do, you
> are left with most of your transmitter power in the carrier and very
> little in the sidebands.
>
> Now look at the FCC definition of occupied bandwidth in part
> 97.3(a)(8):
>
>   Bandwidth. The width of a frequency band outside of which the mean
>   power of the transmitted signal is attenuated at least 26 dB
>   below the mean power of the transmitted signal within the band.
>
> 26 dB is a power ratio of 400:1, so this means that the legal
> bandwidth is that which contains 399/400ths of the total emission.
>
> Let's say we phase modulate +/- 0.05 radians. The carrier amplitude
> will be cos(0.05), which is approximately 1. The sideband amplitude
> will be sin(0.05), which is approximately 0.05. This corresponds to
> a sideband power of 20log10(0.05) = -26 dB relative to the carrier.
>
> See what happened? The sidebands are now so weak as to be excluded
> from the bandwidth definition, so our signal bandwidth is now legally
> zero!
>
> Of course, this is just a legal fiction. The sidebands are still
> there, and if you remove or interfere with them, the signal can no
> longer be demodulated.

>
> The VMSK scam is exactly the same. They show spectrum analyzer
> displays with a single narrow carrier spike. The all-essential
> sidebands are lost in the noise. Worse, you've wasted most of your
> power on a useless carrier, so you now need 26 dB more signal to
> perform as well as suppressed-carrier BPSK.
>
> Phil
>
> ---
> You are currently subscribed to ss as: WB4GCS@AMSAT.ORG
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

51. [ss] Re: "new" modulation technique VMSK/2

From: karel <carlos@aler.org>
Date: Tue, 29 Aug 2000 20:00:25 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106508-2000.08.30-19.59.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil your really ironical. I like that a lot. From the teoritical point of vieuw it seems possible for me, especialy in microwave links, that don't have phase variations. I would like you to be judgemental. I'am not that experienced as you are, thats why I would like to know the insides.
Greetings Karel

At 06:57 AM 8/29/00 -0700, you wrote:
>Phil,
>
>On the other hand, maybe a pure carrier carries enough about the
>"intelligence" being conveyed to... ah, but I'm being judgmental :-)
>
>Enjoy!
>
>Lyle
>
>
>
>---
>You are currently subscribed to ss as: karel@worldcom.nl
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

52. [ss] Re: "new" modulation technique VMSK/2

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Thu, 31 Aug 2000 02:17:51 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106513-2000.08.30-20.24.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello again,

    in response to: Eric S. Johansson
> interesting. where can one find out more information about this modulation technique?

    You can find more details at the following link:
http://www.vmskglobal.com/engineer.html
    You will also find some PDF material at the end of the link page.

>would it be possible to use a single sideband radio as a testbed? use a vmsk modulator the signal in the AudioSpectrum, do all the filtering necessary, and pump it into a single sideband radio??

    I have no idea. As I mentioned, I don't have the resources to implement a VMSK radio, but from the details in the documentation it might be a little more tricky than that. However, as I said before - try it out yourself. It is the best way to evaluate it, and when you done, you will have the knowledge to go one to more advanced projects as the Full-on VMSK Radio. I personally would love to built one, but don't have the

resources for this at the moment.

    in response to: Dale Heatherington
>I'd like to see some proof or even some credible evidence.

    I don't have to prove anything. I am not the inventor or in any way associated with the VMSK people. I am simply a user of the concepts, and have found valuable uses for it in my own domain. You and others are free to do what you want with the information that surrounds you. My message was just to tell people that they should not discard it on sole basis that someone else said it was invalid or valid for that matter - but that they should try it out for themselves before drawing their own conclusions.

>I'm looking forwared to seeing the point proved.

    The point proven, is for myself, to be satisfied that my theory of down mixing can work. It is in no-way mentioned in the VMSK documentation. I don't even know if I can implement it or not. I believe that with a few tricks and changes to the original concept, that it will work - but I will have to try it out in order to prove it to myself. If it be the case, that I do get around to experimenting with it, and the results are positive, I will most certainly distribute the details about it to those that are interested, but not to prove a point to someone else who is not willing to try it out for himself.

>It seems to me that if you need very precise resolution in the sampling of the received signal , a small amount of noise would
corrupt it. Real world applications will have noise.

    Yes that would be the most obvious conclusion one would draw. That fact that the single wire project is working in the Real World in a highly hazardous environment with plenty of interference, is enough proof for me. Of course as I said, it is not a standard implementation, but uses very strange and tweaky behaviour. Then again VMSK is not standard, but a tweaky method. It took me many months to remap my conventional limiting thoughts into a working solution. Each project and situation required its on adaptation of the concepts. The VMSK details are out there (I have already mentioned the links), but my individual implementations are my own.

To All:
    Please note, I am not interested in any heated debate about this subject. I am happy with the knowledge and experience that the VMSK concepts have given me. When I get some time to do it, I will most gladly share that information with others that are also willing the experiment with it. All I ask is that you don't just condemn things just for the sake of it. For example, now days we take for granted having a radio received in the car or home to hear your favourite music. When this concept was first introduced to the people at MARCONI, it was considered so ludicrous that the gave away that patent rights to receiver units to the man that came up with the idea. That is the reason why today, MARCONI does not manufacture any receivers, and any projects they come up with go via their sister company.

    Fernando Carreiro (fmi@carreiro.com)

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53. [ss] Re: "new" modulation technique VMSK/2

From: "Bobbie Johnson" <bobbiej@vnet.net>
Date: Thu, 31 Aug 2000 01:00:53 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106565-2000.08.31-00.06.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thanks for not 'being judgemental' Phil. I'm sure that the intelligence
being
transferred by this 'pure carrier' thread is in sync with the intelligence
of
those... hrrrmph... excuse me.
Thanks de Bobbie

----- Original Message -----
From: "karel" <carlos@aler.org>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Tuesday, August 29, 2000 9:00 PM
Subject: [ss] Re: "new" modulation technique VMSK/2

> Phil your really ironical. I like that a lot. From the teoritical point
of

> vieuw it seems possible for me, especialy in microwave links, that don't
> have phase variations. I would like you to be judgemental. I'am not that
> experienced as you are, thats why I would like to know the insides.
> Greetings Karel
>
> At 06:57 AM 8/29/00 -0700, you wrote:
> >Phil,
> >
> >On the other hand, maybe a pure carrier carries enough about the
> >"intelligence" being conveyed to... ah, but I'm being judgmental :-)
> >
> >Enjoy!
> >
> >Lyle
> >
> >
> >
> >---
> >You are currently subscribed to ss as: karel@worldcom.nl
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
> ---
> You are currently subscribed to ss as: BOBBIEJ@VNET.NET
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
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54. [ss] Re: "new" modulation technique VMSK/2

From: Phil Karn <karn@ka9q.ampr.org>
Date: Wed, 30 Aug 2000 23:47:35 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org,
"karn@ka9q.net"
<LYR4948-106513-2000.08.30-20.24.51--KARN#QUALCOMM.COM@lists.tapr.org>
(fmi@carreiro.com)
Message-ID: <LYR6751-106618-2000.08.31-01.51.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> You can find more details at the following link:
>http://www.vmskglobal.com/engineer.html

This stuff is really sad. It reads like the "tech speak" inserted in a
typical Star Trek episode:

"Mr. La Forge! Reverse the polarity of the phase inducers! Modulate
the tachyon beam! Make it so!"

A person who actually knows the subject matter will recognize many of
the individual terms, but they are strung together as gibberish.

These guys could have saved a lot of money and effort if they'd only
taken the time to read and understand a good comm theory textbook,
starting with fourier transform theory. Then they might have
understood how to properly use their spectrum analyzer.

Phil

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55. [ss] Re: ss digest: August 30, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Thu, 31 Aug 2000 12:48:31 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-106755-2000.08.31-11.54.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phase variations in microwave links.
This is the problem with many schemes that try to jam higher data rates
into a microwave link.

First there is multipath. One big phase variation.

Then there are the filters. RF isn't too much of a problem because it is usually a wide passband filter. The IF filter is often a BIG problem. For those interested in this VSMK thread, look in any good book on Butterworth filters, and check out the passband phase change for any practical filter. Ouch!

Receivers that must maintain a small phase deviation over the passband use Elliptical filters (or is it Bessel, I forget which), which have poor skirt selectivity.

I also thank those who indicate I shouldn't waste time looking at VSMK/2.

Jim Ussailis W1EQO

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

56. [ss] VMSK

From: Phil Karn <karn@ka9q.net>
Date: Thu, 31 Aug 2000 11:22:57 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106772-2000.08.31-13.30.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I got some sort of weird message from the list server complaining about a Message-Id header being in the body of my message, which I didn't have. Not knowing if it got through, I'll try again.

>   You can find more details at the following link:
>http://www.vmskglobal.com/engineer.html

This stuff is really sad. It reads like the "tech speak" inserted in a typical Star Trek episode:

"Mr. La Forge! Reverse the polarity of the phase inducers! Modulate the tachyon beam! Make it so!"

A person who actually knows the subject matter will recognize many of the individual terms, but they are strung together as gibberish.

These guys could have saved a lot of money and effort if they'd only taken the time to read and understand a good comm theory textbook, starting with fourier transform theory. Then they might have understood how to properly use their spectrum analyzer.

Phil

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

57. [ss] Fw: Re: "new" modulation technique VMSK/2

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Thu, 31 Aug 2000 21:15:22 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106796-2000.08.31-15.22.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Kerry,

>Very intereted in your comments. Do you have some website or source to introduce VMSK?

    No, I am afraid I don't have any personal website on VMSK. The documentation I used was older than the updated versions on the address: http://www.vmskglobal.com/engineer.html.

    Please make your own evaluation of the subject. It's the best way to learn. Taking tips from anyone (including me) can accidentally take you on a erroneous route. All I have been trying to say in my previous messages, is that no one an claim anything to anyone until he or she is walked that road, and even then it is a personal experience which will differ from everyone else's.

    At the moment I am busy on a project which does not give me too much free time, but

within +-20 days, I will have time to sift through my code and extract the parts in question, and make them available to all. If by then you have played around with it too, it will be good to have a honest view-point of your evaluation on the board too.

    If you think about it, why would the VMSK people go to so much trouble over several years (at least 4 years), to release bogus technical information, free on the Internet. If they were charging people for the information, then I could understand why so many think it is a scam. - But no, you can download the data, and build your own test projects. Sure, there are weak points, but that's the reason we become HAMs - To learn, to experiment and to improve on the ideas of others.

    Fernando (fmi@carreiro.com)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

58. [ss] Re: VMSK

From: Keith Justice <kf7tp@cybertrails.com>
Date: Thu, 31 Aug 2000 14:01:45 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106804-2000.08.31-16.12.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil, first one came through ok to me.

I want to add my thanks to those who have already expressed their gratitude for Phil's analysis. I hope anyone who is so inclined will go ahead and experiment with it, and share their experience with the rest of us. Seems to me, even if appropriate narrow bandwidth filters can be implemented, multipathing and similar non-gaussian effects are going to mess things up.

Meanwhile, I have a lot of other projects in the queue, and will anxiously await results from others on vmsk's effectiveness over terrestrial paths.

Keith

At 11:22 AM 8/31/2000 -0700, you wrote:
>I got some sort of weird message from the list server complaining about
>a Message-Id header being in the body of my message, which I didn't have.
>Not knowing if it got through, I'll try again.
>
> >   You can find more details at the following link:
> >http://www.vmskglobal.com/engineer.html
>
>This stuff is really sad. It reads like the "tech speak" inserted in a
>typical Star Trek episode:
>
>"Mr. La Forge! Reverse the polarity of the phase inducers! Modulate
>the tachyon beam! Make it so!"
>
>A person who actually knows the subject matter will recognize many of
>the individual terms, but they are strung together as gibberish.
>
>These guys could have saved a lot of money and effort if they'd only
>taken the time to read and understand a good comm theory textbook,
>starting with fourier transform theory. Then they might have
>understood how to properly use their spectrum analyzer.
>
>Phil
>
>---
>You are currently subscribed to ss as: kf7tp@cybertrails.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

Keith Justice, KF7TP
6759 Wagonwheel Lane
Lakeside, AZ 85929
LL: 520-537-8657
Occ. in Mesa, AZ: 480-461-8687
kf7tp@cybertrails.com
kf7tp@kf7tp.ampr.org

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

September 2000

Original source file: ss.0009
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0009

1. [ss] Looking for FPGA design software

From: "Steve" <stevep@flashcom.net>
Date: Fri, 1 Sep 2000 00:40:58 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106886-2000.09.01-02.47.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello to the list, Does anyone know where I can find software that will work with the Xilinx XC3020 FPGA chips? (place & route, etc.)
I picked up a couple at the swapmeet and would like to try them out.
I checked the Xilinx web site and the cheapest thing I found there was $1100.
Too much for a hobby thing!

thanks, Steve

2. [ss] Re: Looking for FPGA design software

From: Jim Sanford <wb4gcs@amsat.org>
Date: Fri, 01 Sep 2000 06:37:02 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106892-2000.09.01-05.44.01--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Steve;
Same problem here. If you find something, pls share!

73,
Jim
wb4gcs@amsat.org

Steve wrote:

> Hello to the list, Does anyone know where I can find software that
> will work with the Xilinx XC3020 FPGA chips? (place & route,
> etc.) I picked up a couple at the swapmeet
> and would like to try them out. I checked
> the Xilinx web site and the cheapest thing I found there was
> $1100. Too much for a hobby thing! thanks,
> Steve

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: Looking for FPGA design software

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Fri, 1 Sep 2000 12:40:09 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106899-2000.09.01-06.47.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

To Steve & Jim Stanford,

> Does anyone know where I can find software that will work with the Xilinx XC3020 FPGA chips?

    Protel Trial versions for 98, 99 and 99 SE offer extensive design in both the form of schematic representation and mnemonic coding for Xilinx products and a host of other FPGA and PLD. Under PLD Design section, you will have to select Xilinx GA3000 for developing for the XC3020. Of course, the downloading of the compiled binary into the FPGA is another story. You will have to make an interface yourself and connect to a parallel or serial port, and write your own code to download it. You probably will get away with writing it in QBasic or some other scripting Language.

    Also, the trial versions only work for 30 days, but are full functional. You can find some cracks on the net to extend the time indefinitely. Please note however that the trial downloads are large (30-60MB), and unless you have a fast link, it will take a while to download.

    You can download the 99 SE Trial Version from the Protel Site (http://www.protel.com). I have the earlier Trial Version 99 SP1, if you should prefer. Please let me know and I will place it on a website for download (remember that they are

large).

    PS! Send me a private message if you require some special favour, if you catch my
drift!

    Fernando (fmi@carreiro.com)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: Looking for FPGA design software

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 1 Sep 2000 23:05:47 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106905-2000.09.01-07.12.46--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Sep 01, 2000 at 12:40:09PM +0100, Fernando M. I. Carreiro wrote:
>   You can download the 99 SE Trial Version from the Protel Site
> (http://www.protel.com). I have the earlier Trial Version 99 SP1, if you should prefer.
> Please let me know and I will place it on a website for download (remember that they are
> large).

The trial version of Protel will let you enter a design -- but you
still need something to map (place and route) the design for the
Xilinx device.

I thought I'd heard that the Xilinx Foundation Base was not too expensive.
Foundation Base has a schematic editor and (I think) VHDL synthesis
using FPGA Express.

73

Hamish (who works with FPGAs for a living)
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] Re: Looking for FPGA design software

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Fri, 1 Sep 2000 13:19:43 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106910-2000.09.01-07.27.36--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In answer to:

> The trial version of Protel will let you enter a design -- but you
still need something to map (place and route) the design for the
Xilinx device.

No, Protel, does do the mapping and compiles into a file to send to the device. (see the
PLD section of Protel)

Fernando (fmi@carreiro.com)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: Looking for FPGA design software

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 1 Sep 2000 23:27:49 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106914-2000.09.01-07.34.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Sep 01, 2000 at 01:19:43PM +0100, Fernando M. I. Carreiro wrote:
> > The trial version of Protel will let you enter a design -- but you
> still need something to map (place and route) the design for the

> Xilinx device.
>
> No, Protel, does do the mapping and compiles into a file to send to the device. (see the
> PLD section of Protel)

OK, for PLDs only?

CPLDs are a bit easier anyway; you can get the mapping done
using the WebFitter on Xilinx's web site. But they're not as useful
as an FPGA like the 3020 (which the original question was about).

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: Looking for FPGA design software

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Fri, 1 Sep 2000 14:36:41 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106927-2000.09.01-08.43.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> OK, for PLDs only?

No, when I said the PLD section, it is becuase it is all under that name, under the PLD menu option.

1) Start a Schematic File
2) Select the Menu PLD -> Configure
3) Select the Target Device under the options Tab. In this case chose XILINX ga3000 for the XC3020
4) Select the output format (eg. JEDEC, POF, PRG, HEX, etc.)
5) Select output options as required.
6) Now draw your design using the virtual sub-components as required fromor the Xilix library
7) Compile it using (PLD -> Compile) This will also produce a CUPL file which is then compiled in to the final output format.
8) Use the simulations to test (PLD -> Simulate)
9) View the Output file before exporting it to a DOS File.

In the Protel 99 SP1 Version, under the examples directory, there should be a Xilinx Sub-directory with examples, of which one is for the XC3020PC68 [XILINX 3K Series.ddb]. (This if you installed the Xilinx Section when you were prompted when you first installed the package)

For more details consult the On-line Help File or the Protel Documentation (also available in PDF format on the Protel website). You can also download the Xilinx libraries from their site.

Fernando (fmi@carreiro)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] Re: Looking for FPGA design software

From: "Steve" <stevep@flashcom.net>
Date: Fri, 1 Sep 2000 13:28:58 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106972-2000.09.01-15.35.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

There was a $95 special going on but it looks like it is over. Back to the
old price.

Steve

----- Original Message -----
From: Hamish Moffatt <hamish@cloud.net.au>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Sent: Friday, September 01, 2000 5:05 AM

Subject: [ss] Re: Looking for FPGA design software

| I thought I'd heard that the Xilinx Foundation Base was not too expensive.
| Foundation Base has a schematic editor and (I think) VHDL synthesis
| using FPGA Express.
|
|
| 73
|
| Hamish (who works with FPGAs for a living)
| --

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Re: Looking for FPGA design software

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sat, 2 Sep 2000 09:16:32 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106984-2000.09.01-17.23.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Sep 01, 2000 at 02:36:41PM +0100, Fernando M. I. Carreiro wrote:
>   7) Compile it using (PLD -> Compile) This will also produce a CUPL file which is
> then compiled in to the final output format.
>   8) Use the simulations to test (PLD -> Simulate)
>   9) View the Output file before exporting it to a DOS File.

And this actually does the entire place and route itself?

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Re: Looking for FPGA design software

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Fri, 1 Sep 2000 23:40:37 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-106986-2000.09.01-17.47.15--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> And this actually does the entire place and route itself?

    No, Compiling only sets up for the internal mapping/routing of the FPGA (by converting the schematic representation into the CUPL and then the final output format). The external design can be set-up in a master schematic (which would have a link to the FPGA schematic), where you place all the other components, and from which you would make the netlist for the PCB.

    For auto-routing and placement, you would start a PCB document, define all the keep-out areas, and use the net-list from the previous step to produce the routing, placement, etc.

    Of course, I am making it short and simple here. Use the examples, or follow the tutorials available on the Protel website.

Fernando (fmi@carreiro.com)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: Looking for FPGA design software

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Sat, 2 Sep 2000 15:37:34 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-107107-2000.09.02-09.45.01--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Does anyone know where I can find software that will work with the Xilinx XC3020 FPGA chips?

    On the Protel FTP Site there is an example of schematic, source code and binary for building a simple GAL16V8 programmer (via the parallel port). You could use this as a reference for building a programmer for the Xilinx XC3020 FPGA.

    "ftp://207.250.4.10/pub/library/download/legacy_libraries/Applications & Examples/PLD/galprog.zip"

    Fernando (fmi@carreiro.com)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: Looking for FPGA design software

From: Brett Glass <brett@lariat.org>
Date: Sat, 02 Sep 2000 10:25:20 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-107114-2000.09.02-11.32.33--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

My advice: Talk to a prof at a local college with a good electronics lab. Maybe enroll in a course. Quite a few schools have the software and programming hardware.... I'm not sure, but I suspect that Xilinx gives them a special discount.

--Brett Glass

At 01:40 AM 9/1/2000, Steve wrote:

>Hello to the list,   Does anyone know where I can find software that will work with the Xilinx XC3020 FPGA chips? (place & route, etc.)
>   I picked up a couple at the swapmeet and would like to try them out.
>   I checked the Xilinx web site and the cheapest thing I found there was $1100.
>   Too much for a hobby thing!
>
>thanks, Steve

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: dsss pn codes(paul)

From: avraham kurtz <kurtz@beitza.jct.ac.il>
Date: Tue, 5 Sep 2000 16:43:22 +0300 (IDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-107706-2000.09.05-08.48.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, 10 Aug 2000 rv9j@virgilio.it wrote:
Hello Paul
 I got your e-mail but haven't had time to figureout how to polinomio yet, since Iwason vacation for three weeks ,I will let you know if I figure it out.
Thank you very much
Avraham KURTZ
>
> >
> >
> > Hello,
> >I plan to use a pn code with 16 bit shift register, I was wondering if
> > someone can give me the feedback tap points for a m-length code.
> > Thank you
> > Avraham Kurtz
> >
> >
> > ---
> > You are currently subscribed to ss as: RV9J@VIRGILIO.IT
> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> > please let me know if you 've received my last mail that showed
> the polinomio to use in a PN RANDOM GEN!
> i'll await yr reply
> regards

> paul
>
> RV9J@VIRGILIO.IT
> --
> Virgilio Mail - Il tuo indirizzo E-mail gratis
> http://mail.virgilio.it
>
>
>
> ---
> You are currently subscribed to ss as: kurtZ@avoda.jct.ac.il
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Re: dsss pn codes(paul)

From: lu4dxt <lu4dxt@volta.ing.unlp.edu.ar>
Date: Thu, 7 Sep 2000 09:45:23 -0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108073-2000.09.07-07.38.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,
   There are many polynomial of degree 16th that do the trick. One of them is:

        210013 in octal

or:

        x^16 + x^12 + x^3 + x^2 + 1

This means that you must add (or-exclusive) the stages number 2, 3, 12 and
16 and feed back the result to the first stage. There is not a primitive
polynomial of degree 16 with a fewer number of feedbacks.

        Kind regards

                Hugo

At 16:43 09/05/2000 +0300, you wrote:
>On Thu, 10 Aug 2000 rv9j@virgilio.it wrote:
>Hello Paul
> I got your e-mail but haven't had time to figureout how to polinomio yet,
>since Iwason vacation for three weeks ,I will let you know if I figure it
>out.
>Thank you very much
>Avraham KURTZ
>>
>> >
>> >
>> > Hello,
>> >I plan to use a pn code with 16 bit shift register, I was wondering if
>> > someone can give me the feedback tap points for a m-length code.
>> > Thank you
>> > Avraham Kurtz
>> >
>> >
>> > ---
>> > You are currently subscribed to ss as: RV9J@VIRGILIO.IT
>> > To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>> >
>> > please let me know if you 've received my last mail that showed
>> the polinomio to use in a PN RANDOM GEN!
>> i'll await yr reply
>> regards
>> paul
>>
>> RV9J@VIRGILIO.IT
>> --
>> Virgilio Mail - Il tuo indirizzo E-mail gratis
>> http://mail.virgilio.it
>>
>>
>>

>> ---
>> You are currently subscribed to ss as: kurtZ@avoda.jct.ac.il
>> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>>
>
>
>---
>You are currently subscribed to ss as: LU4DXT@VOLTA2.ING.UNLP.EDU.AR
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] Re: dsss pn codes(paul)

From: avraham kurtz <kurtz@avoda.jct.ac.il>
Date: Thu, 7 Sep 2000 16:07:49 +0300 (IDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108077-2000.09.07-08.13.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I think I've got it thanks (I was wondering HOW TO USE OCTAL BUT i
UNDERSTAND IT NOW)

Avraham Kurtz

On Thu, 7 Sep 2000, lu4dxt wrote:

> Hi,
> There are many polynomial of degree 16th that do the trick. One of them is:
>
>   210013 in octal
>
> or:
>
>   x^16 + x^12 + x^3 + x^2 + 1
>
> This means that you must add (or-exclusive) the stages number 2, 3, 12 and
> 16 and feed back the result to the first stage. There is not a primitive
> polynomial of degree 16 with a fewer number of feedbacks.
>
>   Kind regards
>
>   Hugo
>
>
> At 16:43 09/05/2000 +0300, you wrote:
> >On Thu, 10 Aug 2000 rv9j@virgilio.it wrote:
> >Hello Paul
> > I got your e-mail but haven't had time to figureout how to polinomio yet,
> >since Iwason vacation for three weeks ,I will let you know if I figure it
> >out.
> >Thank you very much
> >Avraham KURTZ
> >>
> >> >
> >> >
> >> > Hello,
> >> >I plan to use a pn code with 16 bit shift register, I was wondering if
> >> > someone can give me the feedback tap points for a m-length code.
> >> > Thank you
> >> > Avraham Kurtz
> >> >
> >> >
> >> > ---
> >> > You are currently subscribed to ss as: RV9J@VIRGILIO.IT
> >>> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >> >
> >> > please let me know if you 've received my last mail that showed
> >> the polinomio to use in a PN RANDOM GEN!
> >> i'll await yr reply
> >> regards
> >> paul
> >>
> >> RV9J@VIRGILIO.IT

> >> --
> >> Virgilio Mail - Il tuo indirizzo E-mail gratis
> >> http://mail.virgilio.it
> >>
> >>
> >>
> >> ---
> >> You are currently subscribed to ss as: kurtZ@avoda.jct.ac.il
> >> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >>
> >
> >
> >---
> >You are currently subscribed to ss as: LU4DXT@VOLTA2.ING.UNLP.EDU.AR
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
>
> ---
> You are currently subscribed to ss as:kurtZ@avoda.jct.ac.il
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] Block Converter

From: The Whiting Household <whitings@worldnet.att.net>
Date: Sat, 09 Sep 2000 19:16:00 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108435-2000.09.09-19.26.15--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Can anyone help? I'm looking for a little transponder/transverter that would
take 335 to 400 MHz (or another band, but not ham) in a single frequency
block, and convert it into another block at another band.

Any ideas?

Cheers/ Rick W0TN

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] FREE Investor's kit - Wireless Company Goes Public

From: westoakwireless@yahoo.com
Date: Sun, 10 Sep 2000 05:57:34 +0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108443-2000.09.09-20.05.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

****

TELESIS NORTH GOES PUBLIC

September 9, 2000

Telesis North, (stock symbol: WO.CDNX), is a wireless connectivity software company providing
applications for the exploding wireless communications market.

INVESTMENT HIGHLIGHTS:

-The company has been in business since 1989, with an established customer base and worldwide
distribution channels.

-Founded by 2 former engineers from Nortel Networks, world leader in telecom technology and one of the
most active stocks on the TSE.

-Strong management team that includes a former Vice President of Infowave Software (IW. TSE), a wireless
 software stock in the same niche as Telesis North whose market capitalization hit 1.3 billion dollars!

-Strong working relationships with Inmarsat, Microsoft, Telenor, SingTel, Eicon, and Fuji Trading.

-Recently announce distribution agreement and investment from Stratos Global Corporation (SGB. TSE), one
 of Canada□s fastest growing companies and a world leader in satellite and wireless communications

services.

Telesis North is in the process of going public through a merger with West Oak Resource Corp.

For a FREE company information kit click:
<http://www.westoakresource.com/contactus.html>

For the latest NEWS on the Company Click Here: <http://www.westoakresource.com/news082100.html>

****

This bulletin has been sent to you at no charge.

THIS IS NOT A RECOMMENDATION TO BUY OR SELL ANY SECURITY!

To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: FREE Investor's kit--more SPAM to get rid of

From: Lawrence Gruber <lawrence@javanet.com>
Date: Sat, 09 Sep 2000 21:34:51 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108448-2000.09.09-20.45.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

SPAM invades TAPR SS Group..

Does anyone know what to do when you get something like
this..   (which we all just have)

>To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>

..or a URL that 'bounces' (never reaching the recipient)

..when it says to put the word "remove" in the the subject?

Is there a website to complain to for offensive SPAM?

Thanks,

Larry

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Larry (Lawrence) J. Gruber
Medford, Massachusetts USA
lawrence@javanet.com
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

19. [ss] Re: FREE Investor's kit--more SPAM to get rid of

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Sun, 10 Sep 2000 08:17:56 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108517-2000.09.10-08.26.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lawrence Gruber wrote:
>
> SPAM invades TAPR SS Group..
>
> Does anyone know what to do when you get something like
> this..   (which we all just have)
>
> >To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>

>
> ..or a URL that 'bounces' (never reaching the recipient)
>
> ..when it says to put the word "remove" in the the subject?
>
> Is there a website to complain to for offensive SPAM?
Because of the way the list software works on TAPR it's increasingly
hard for folks like me to track SPAM like that to its origins and choke
it until it dies. The best thing to do here is ignore it.

73, gerry n5jxs
--
Gerry Creager   gerry@cs.tamu.edu, gerry@page4.cs.tamu.edu
Network Engineering |Research focusing on
Academy for Advanced Telecommunications |Satellite Geodesy and
and Learning Technologies |Geodetic Control
Texas A&M University   979.458.4020 (Phone) -- 979.847.8578 (Fax)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] Re: FREE Investor's kit--more SPAM to get rid of

From: Bob Nielsen <nielsen@oz.net>
Date: Sun, 10 Sep 2000 09:17:03 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108532-2000.09.10-11.24.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sun, Sep 10, 2000 at 08:17:56AM -0500, Gerry Creager N5JXS wrote:

> Because of the way the list software works on TAPR it's increasingly
> hard for folks like me to track SPAM like that to its origins and choke
> it until it dies. The best thing to do here is ignore it.

Yeah, I think every mailing list program I've seen has one drawback or
another (I still use majordomo, which at least doesn't have this
problem).

Does Lyris have an option that restricts messages to list members only?

Bob

--
Bob Nielsen, N7XY   nielsen@oz.net
Bainbridge Island, WA   http://www.oz.net/~nielsen

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] Re: FREE Investor's kit--more SPAM to get rid of

From: stannard@alaska.net
Date: Sun, 10 Sep 2000 11:09:44 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108553-2000.09.10-14.29.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In
<LYR5161-108448-2000.09.09-20.45.04--STANNARD#ALASKA.NET@lists.tapr.org>,
on 09/10/00
   at 11:09 AM, Lawrence Gruber <lawrence@javanet.com> said:

>SPAM invades TAPR SS Group..

>Does anyone know what to do when you get something like
>this..   (which we all just have)

>>To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>

>..or a URL that 'bounces' (never reaching the recipient)

>..when it says to put the word "remove" in the the subject?

>Is there a website to complain to for offensive SPAM?

>Thanks,

>Larry

> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> Larry (Lawrence) J. Gruber
> Medford, Massachusetts USA
>   lawrence@javanet.com
>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Hello all,

Do NOT send "remove" msg back to sender; it just gets your address put on
a list, which may be sold to other 'marketers'.

I use the url below to get rid of 70-90% of SPAM. However, the moderator
of this list may have an "abuse" company to which these can be
forwarded--my ISP does.

John
KL7JL
--
----
stannard@alaska.net
I've been telling them for years: "SCSI isn't SCUZZY, it's SEXY!"

Sign up for FREE anti-spam service at: http://www.brightmail.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] Re: FREE Investor's kit--more SPAM to get rid of

From: Brett Glass <brett@lariat.org>
Date: Sun, 10 Sep 2000 14:02:21 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108563-2000.09.10-15.09.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 07:34 PM 9/9/2000, Lawrence Gruber wrote:

>SPAM invades TAPR SS Group..
>
>Does anyone know what to do when you get something like
>this..   (which we all just have)
>
>>To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>
>
>..or a URL that 'bounces' (never reaching the recipient)
>
>..when it says to put the word "remove" in the the subject?
>
>Is there a website to complain to for offensive SPAM?

I can see that you're new to this.

When you receive spam, NEVER reply to the "remove" address. The spammers
are hoping that you will be unknowledgeable enough to do this. At best,
your mail will just bounce. At worst, you'll furnish the spammer with your
authentic, live e-mail address, which will be added to spam lists that are
sold on CD-ROM. You'll never get rid of the spam what that's happened.

Don't visit the URL, either. In many cases (though not when the spam is
sent to the list), the URL can be jiggered to verify your e-mail address
also.

The correct thing to do is complain to the source's ISP(s). (There may be
more than one, since the mail will often come from a throwaway dial-in
account while the Web site is hosted elsewhere and the reply addresses
are at others.) What's more, if the spam was broadcast through an open
relay, it's a good idea to send it to the MAPS RSS so that the relay is
blocked.

See cauce.org and maps.vix.com for more info.

It's unfortunate that this list is handled by Lyris, which "launders" the
headers so that members of a list can't track the spam back to the source.
However, it ought to be possible for the moderator to reject mail which
does not come from a known member of the list. I'm not sure why s/he
has not enabled this feature.

--Brett Glass

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] Re: FREE Investor's kit--more SPAM to get rid of

From: Brett Glass <brett@lariat.org>
Date: Sun, 10 Sep 2000 14:04:03 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108566-2000.09.10-15.11.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Oops... "what that's happened" should be "once that's happened" in
my previous message.

--Brett

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] Re: ss digest: September 09, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Sun, 10 Sep 2000 20:50:02 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-108620-2000.09.10-19.56.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Look at the series of NEC ICs. (AKA Cal Eastern) www.cal.com ???

They have a couple of mixers that would do the job. There is also an LNA
that works very well from VHF to at least the 900 MHz band.

If your are manufacturing, you will want to look at the "TB" size, as the
other larger sizes are on their way out. The "tb" size is very small. I
think it is equivalent to a six lead SOT 363. (SOT663 ??).

Now the good part is they have developers, or evaluation boards, that you
can get. They make the engineering task much quicker.

You will need a local oscillator. If your task is broad band, look into a
SAW oscillator. RFM has a circuit and list of almost a zillion
frequencies in their catalog. RFM.com, not to be confused with RFMD.com

RF Microdevices (RFMD) also has downconverter ICs, and probably the whole
thing on two evaluation boards. Their stuff is great, at your frequency,
once it is in the circuit. Putting their ICs in a circuit is another
matter. They have unprotected CMOS gates.

Some of RFMDs stuff is "pushing it" at 900 MHz tho. In that band you need
to call them & get the lowdown from the "area manager."

If you do use RFMD, a trick is to put 10K to ground on every input &
output pin before you insert the IC in the circuit. Then use lots of
solder paste. This effectivly shorts the CMOS gate during assembly.

Jim Ussailis, W1EQO
National Wireless, Inc.
ussailis@shaysnet.com

On Sun, 10 Sep 2000, TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Saturday, September 09, 2000.
>
> 1. Block Converter
> 2. FREE Investor's kit - Wireless Company Goes Public
> 3. Re: FREE Investor's kit--more SPAM to get rid of

>
> --
>
> Subject: Block Converter
> From: The Whiting Household <whitings@worldnet.att.net>
> Date: Sat, 09 Sep 2000 19:16:00 -0500
> X-Message-Number: 1
>
> Can anyone help? I'm looking for a little transponder/transverter that would
> take 335 to 400 MHz (or another band, but not ham) in a single frequency
> block, and convert it into another block at another band.
>
> Any ideas?
>
> Cheers/ Rick W0TN
>
> --
>
> Subject: FREE Investor's kit - Wireless Company Goes Public
> From: westoakwireless@yahoo.com
> Date: Sun, 10 Sep 2000 05:57:34 +0500
> X-Message-Number: 2
>
> **
>
> TELESIS NORTH GOES PUBLIC
>
> September 9, 2000
>
> Telesis North, (stock symbol: WO.CDNX), is a wireless connectivity software company providing
applications for the exploding wireless communications market.
>
> INVESTMENT HIGHLIGHTS:
>
> -The company has been in business since 1989, with an established customer base and worldwide
distribution channels.
>
> -Founded by 2 former engineers from Nortel Networks, world leader in telecom technology and one of the
 most active stocks on the TSE.
>
> -Strong management team that includes a former Vice President of Infowave Software (IW. TSE), a
wireless software stock in the same niche as Telesis North whose market capitalization hit 1.3 billion
dollars!
>
> -Strong working relationships with Inmarsat, Microsoft, Telenor, SingTel, Eicon, and Fuji Trading.
>
> -Recently announce distribution agreement and investment from Stratos Global Corporation (SGB. TSE),
one of Canada□s fastest growing companies and a world leader in satellite and wireless communications
services.
>
> Telesis North is in the process of going public through a merger with West Oak Resource Corp.
>
> For a FREE company information kit click:
> <http://www.westoakresource.com/contactus.html>
>
> For the latest NEWS on the Company Click Here: <http://www.westoakresource.com/news082100.html>
>
> **
>
> This bulletin has been sent to you at no charge.
>
> THIS IS NOT A RECOMMENDATION TO BUY OR SELL ANY SECURITY!
>
> To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>
>
>
>
>
>
> --
>
> Subject: Re: FREE Investor's kit--more SPAM to get rid of
> From: Lawrence Gruber <lawrence@javanet.com>
> Date: Sat, 09 Sep 2000 21:34:51 -0400
> X-Message-Number: 3
>
> SPAM invades TAPR SS Group..
>
> Does anyone know what to do when you get something like

> this..   (which we all just have)
>
> >To remove yourself from this mailing list click here: <westoakwireless@yahoo.com>
>
> ..or a URL that 'bounces' (never reaching the recipient)
>
> ..when it says to put the word "remove" in the the subject?
>
> Is there a website to complain to for offensive SPAM?
>
> Thanks,
>
> Larry
>
>
>
>
>
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
>   Larry (Lawrence) J. Gruber
>   Medford, Massachusetts USA
>   lawrence@javanet.com
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
>
>
>
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: ussailis@shaysnet.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] Re: ss digest: September 09, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Sun, 10 Sep 2000 20:52:56 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-108623-2000.09.10-19.59.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yeah, and try to get out from the RFGlobalnet mailing list. I've tried
their solution, any many others. I still get their "mail."

Jim, W1EQO

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] DCC Update 9/11/2000

From: "Steven R. Bible" <n7hpr@amsat.org>
Date: Mon, 11 Sep 2000 12:19:03 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108740-2000.09.11-11.29.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

19th Annual ARRL/TAPR Digital Communications Conference
Orlando, FL □ September 22-24, 2000

** Update 9/11/2000 **

A little more that one week away, the 19th Annual ARRL/TAPR Digital
Communications Conference is about to begin. For detailed information about
the conference, please visit the official DCC web page at
http:www.tapr.org/dcc.

Registration for the conference will be taken at the door. Friday
registration is for an entire afternoon APRS activities, demonstrations, and
presentations. Saturday registration includes conference proceedings,
lunch, and a full day of presentations. Saturday night includes Banquet,

dinner speaker, and prize drawing. Sunday registration is for the PICmicro Design seminar.

Banquet Prize Drawings:
Grand Prize Kenwood TM-D700A (donated by Kenwood)
2nd Grand Prize Palm VII Personal Digital Assistant
Two Motorola Oncore M12 GPS Evaluation Kits (donated by Synergy Systems, LLC)

Map and coordinates:
A map of the conference hotel and coordinates are available at ftp://ftp.tapr.org/dcc/dcc.hotel.map.pdf

Speakers:
The following is a list of presenters. Preliminary schedule is available from ftp://ftp.tapr.org/dcc/2000.dcc.schedule.pdf

APRS Seminar - Friday September 22, 2000

John Ackerman, N9UR	APRS WG
Steve Bible, N7HPR	T-238 Weather Station
John Blowsky, KB2SCS	APRS LOOKUP
Steve Bragg, KA9MVA	HamHud
Bob Bruninga, WB4APR	APRSdos, satellite, etc.
Steve Dimse, K4HG	Internet APRS
Walter Dunckel, KD6VYV	Serial Control of D7/D700
John Hansen, W2FS	KISS TNC, D700 Keyboard
Dale Huguley, KG5QD	Weather Server
Larry Gahagan, AB0JM	Wildfire Support
Byon Garranrant, N6BG	TinyTrack
Mike Musick, N0QBF	PalmAPRS/Tracker construction
Robert Osband, N4SCY	Public Service with APRS
Tom Schaefer, NY4I	APRS Email Gateway
Darryl Smith, VK2TDS	APRS in the 2000 Olympics
The Sprouls, WU2Z/KB2ICI	Mac/Win/XAPRS
Rob Wittner, KZ5RW	APRS-CE

Main Session, Paper Presentation - Saturday 23, 2000
Titles and abstracts are available at http://www.tapr.org/tapr/html/Fcnc19.html

EasyTrak, A PIC Based Rotor/Radio Controller Interface
By Steve Bible N7HPR

APRS Tiny Web Pages
By Bob Bruninga WB4APR

Channel Capacity Simulation of Peer-to-Peer Spread Spectrum Satellite Transponders
By Matthew Ettus N2MJI

Correlation for Direct Sequence Spread Spectrum
By Panagiotis Gavalas

PIC-et Radio II: How to Receive AX.25 UI Frames Using Inexpensive PIC Microcontrollers
By John A. Hansen W2FS

Winlink 2000 ...A Global Ham Message Transfer and Deliver Network
By Hans Kessler N8PGR, Vic Poor W5SMM, Rick Muething KN6KZB, and Steve Waterman K4CJX

Frequency Offset Acquisition and Tracking Algorithms, Part 1 and Part 2
By Mohamed K. Nezami

External Common Gateway Interface (CGI) Access to FindU
By Thomas M. Schaefer NY4I

Server Applications within APRS Internet Server Environment
By Thomas M. Schaefer NY4I

APRS and the TAPR EasyTrak Az/El Rotor Control System
By Keith Sproul WU2Z

APRS and Kenwood TM-D700 Voice Messaging
By Keith Sproul WU2Z and Mark Sproul KB2ICI

Internet Wide Callsign Database using LDAP
By Mark Sproul KB2ICI

Automatic Voice Relay System
By Bob Bruninga WB4APR

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: ss digest: September 09, 2000

From: "Lord Ferrox Tutinean" <ferrox@hotmail.com>
Date: Mon, 11 Sep 2000 20:32:42 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-108780-2000.09.11-15.40.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>From: "TAPR Spread Spectrum Special Interest Group digest"
><ss@lists.tapr.org>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "ss digest recipients" <ss@lists.tapr.org>
>Subject: ss digest: September 09, 2000
>Date: Sun, 10 Sep 2000 00:01:03 -0500
>
RESPECTFULLY:
Please change my subscription address from ferrox@hotmail.com to
ltutinean@netscape.net.
Thanks in advance.
LT

>TAPR Spread Spectrum Special Interest Group Digest for Saturday, September
>09, 2000.
>
>1. Block Converter
>2. FREE Investor's kit - Wireless Company Goes Public
>3. Re: FREE Investor's kit--more SPAM to get rid of
>
>--
>
>Subject: Block Converter
>From: The Whiting Household <whitings@worldnet.att.net>
>Date: Sat, 09 Sep 2000 19:16:00 -0500
>X-Message-Number: 1
>
>Can anyone help? I'm looking for a little transponder/transverter that
>would
>take 335 to 400 MHz (or another band, but not ham) in a single frequency
>block, and convert it into another block at another band.
>
>Any ideas?
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>Cheers/ Rick W0TN
>
>--
>
>Subject: FREE Investor's kit - Wireless Company Goes Public
>From: westoakwireless@yahoo.com
>Date: Sun, 10 Sep 2000 05:57:34 +0500
>X-Message-Number: 2
>
>**
>
>TELESIS NORTH GOES PUBLIC
>
>September 9, 2000
>
>Telesis North, (stock symbol: WO.CDNX), is a wireless connectivity software
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>
>INVESTMENT HIGHLIGHTS:
>
>-The company has been in business since 1989, with an established customer
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>-Founded by 2 former engineers from Nortel Networks, world leader in
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>

>-Strong management team that includes a former Vice President of Infowave
>Software (IW. TSE), a wireless software stock in the same niche as Telesis
>North whose market capitalization hit 1.3 billion dollars!
>
>-Strong working relationships with Inmarsat, Microsoft, Telenor, SingTel,
>Eicon, and Fuji Trading.
>
>-Recently announce distribution agreement and investment from Stratos
>Global Corporation (SGB. TSE), one of Canada□s fastest growing companies
>and a world leader in satellite and wireless communications services.
>
>Telesis North is in the process of going public through a merger with West
>Oak Resource Corp.
>
>For a FREE company information kit click:
><http://www.westoakresource.com/contactus.html>
>
>For the latest NEWS on the Company Click Here:
><http://www.westoakresource.com/news082100.html>
>
>**
>
>This bulletin has been sent to you at no charge.
>
>THIS IS NOT A RECOMMENDATION TO BUY OR SELL ANY SECURITY!
>
>To remove yourself from this mailing list click here:
><westoakwireless@yahoo.com>
>
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>
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>
>--
>
>Subject: Re: FREE Investor's kit--more SPAM to get rid of
>From: Lawrence Gruber <lawrence@javanet.com>
>Date: Sat, 09 Sep 2000 21:34:51 -0400
>X-Message-Number: 3
>
>SPAM invades TAPR SS Group..
>
>Does anyone know what to do when you get something like
>this..   (which we all just have)
>
> >To remove yourself from this mailing list click here:
><westoakwireless@yahoo.com>
>
>..or a URL that 'bounces' (never reaching the recipient)
>
>..when it says to put the word "remove" in the the subject?
>
>Is there a website to complain to for offensive SPAM?
>
>Thanks,
>
>Larry
>
>
>
>
>
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
>   Larry (Lawrence) J. Gruber
>   Medford, Massachusetts USA
>   lawrence@javanet.com
>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
>
>
>
>
>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to ss as: ferrox@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com.

Share information about yourself, create your own public profile at
http://profiles.msn.com.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] direct sequence ss code

From: Jane Johnson <rosancocho@yahoo.com>
Date: Fri, 15 Sep 2000 11:13:10 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-109487-2000.09.15-13.23.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,
I am a student at UC Davis. I just started learning
about ss. This question is probably too elementary for
the type of things you do, but if someone could help
me I would appreciate it very much.
I am writing a code in Matlab to do direct sequence ss
using a simple BPSK mod/demod scheme. I'll number some
of the steps I am doing and you could tell me if I am
doing something wrong:
1) I have a pseudo-random sequence of length 7
(+/-1's).
2) create message to send, of +/-1's, and repeat each
one of them 7 times so that the ratio of their periods
is 1:7
3) I multiply the message by the pn sequence
4)perform modulation
5)add different levels of noise (send through channel)
6)perform demodulation
7)multiply back by the pn sequence
8)compare received message to initial message
9)calculate ber

This code doesn't seem to work for me. If you are
interested in the files I can send them to you or if
you know of a code I could look at, preferably witten
in Matlab,I would appreciate any help.
Thank you very much

_____
Do You Yahoo!?
Yahoo! Mail - Free email you can access from anywhere!
http://mail.yahoo.com/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: ss digest: September 15, 2000

From: "Christian Trott" <christian.trott@santafeterminal.com>
Date: Mon, 18 Sep 2000 09:08:58 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-109930-2000.09.18-09.16.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hey, Kirk,
        Yeah, I sent her an e-mail and told her I'd
look at her scripts if she wanted. Couldn't find
anything on her at the UC Davis site...

        I think the idea behind step 2 should be fine.
Basically, she's taking her symbol, and breaking it
into 7 'sub-symbols' so that it's easy to multiply it
by the (7-bit) pn code.

                                    -ct

"TAPR Spread Spectrum Special Interest Group digest (by way of Richard A. Kirkpatrick)" wrote:
>

> In case you need it... No answers yet although there may be some by now, the digest only comes out at midnight.
>
> Is her step 2) bogus?
>
> I'll let you correspond with her, make her an e-penpal
>
> Kirk
>
> 1. direct sequence ss code
>
> ----------
>
> Subject: direct sequence ss code
> From: Jane Johnson <rosancocho@yahoo.com>
> Date: Fri, 15 Sep 2000 11:13:10 -0700 (PDT)
> X-Message-Number: 1
>
> Hi,
> I am a student at UC Davis. I just started learning
> about ss. This question is probably too elementary for
> the type of things you do, but if someone could help
> me I would appreciate it very much.
> I am writing a code in Matlab to do direct sequence ss
> using a simple BPSK mod/demod scheme. I'll number some
> of the steps I am doing and you could tell me if I am
> doing something wrong:
> 1) I have a pseudo-random sequence of length 7
> (+/-1's).
> 2) create message to send, of +/-1's, and repeat each
> one of them 7 times so that the ratio of their periods
> is 1:7
> 3) I multiply the message by the pn sequence
> 4)perform modulation
> 5)add different levels of noise (send through channel)
> 6)perform demodulation
> 7)multiply back by the pn sequence
> 8)compare received message to initial message
> 9)calculate ber
>
> This code doesn't seem to work for me. If you are
> interested in the files I can send them to you or if
> you know of a code I could look at, preferably witten
> in Matlab,I would appreciate any help.
> Thank you very much
>
> _____
> Do You Yahoo!?
> Yahoo! Mail - Free email you can access from anywhere!
> http://mail.yahoo.com/
>
> ---
>
> END OF DIGEST
>
> ---
> You are currently subscribed to ss as: kirk@bose.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

30. [ss] Final Update - DCC Orlando, FL Sep 22-24, 2000

From: "Steven R. Bible" <srbible@gate.net>
Date: Mon, 18 Sep 2000 12:33:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-109952-2000.09.18-11.41.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

19th Annual ARRL/TAPR Digital Communications Conference
Orlando, FL September 22-24, 2000

** Final Update 9/18/2000 **

Counting down the final days until the 19th Annual ARRL/TAPR Digital
Communications Conference this weekend in Orlando, Florida. For detailed
information about the conference, please visit the official DCC web page at
http:www.tapr.org/dcc.

Registration for the conference will be taken at the door. Friday registration is for an entire afternoon APRS activities, demonstrations, and presentations. Saturday registration includes conference proceedings, lunch, and a full day of presentations. Saturday night includes Banquet, dinner speaker, and prize drawing. Sunday registration is for the PICmicro Design seminar.

DCC Social:
Please join us Friday evening at 7:00 PM for a social get together time. The social is generously hosted by the Packet Radio Users Group of Japan (PRUG).

PRUG Presentation:
Friday night the Packet Radio Users Group of Japan will present talks on their progress on high-speed digital networks in Japan.

Saturday Night Banquet Speaker:
Mr. Doug Campbell, of Triton Network Systems (http://www.triton-network.com) will be our DCC Banquet Speaker. Triton Network Systems is located in Orlando, Florida.

Vice President Product Management, Marketing, & International Business as Vice President of International Sales, Marketing and Product Management, Mr. Campbell leads the assessment of global community needs and spearheads the development of Triton Network Systems' product and marketing strategies.

Mr. Campbell cultivated his management skills in sales, marketing and product development working 17 years for Nortel Networks. While based in Singapore, he built a multifunctional pan-Asian team, which successfully captured a 100% market share with MCI-WorldCom Asia, successfully introducing a number of new products. Prior to this, Mr. Campbell was instrumental in the establishment of an SDH broadband equipment joint venture in China and served as a member of the company's Board of Directors.

Mr. Campbell received a Bachelor of Engineering Physics degree from the Royal Military College of Canada in Kingston, Canada, and a Master of Business Administration from IMD (University of Lausanne) in Switzerland.

Banquet Prize Drawings:
Grand Prize Kenwood TM-D700A (donated by Kenwood)
2nd Grand Prize Palm VII Personal Digital Assistant (donated by TAPR)
Two Motorola Oncore M12 GPS Evaluation Kits (donated by Synergy Systems, LLC)
Microchip PICSTART-PLUS PICmicro Programmer (donated by Microchip)

PIC Seminar Prize Drawing
Microchip MPLAB-ICD (donated by Microchip)

Project and Demonstration Room:
The DCC is a place where people can talk about their projects and gain ideas for new ones. The Project and Demonstration Room has become a recent DCC tradition where people can bring and display their projects. The room will be located next to the registration room and across the hall from the main presentation room. The Project and Demonstration Room will open at registration time and be closed (locked) 11:00 PM Friday and Saturday night.

Map and coordinates:
A map of the conference hotel and coordinates are available at ftp://ftp.tapr.org/dcc/2000.dcc.hotel.map.pdf

Speakers:
The following is a list of presenters. PDF version available from ftp://ftp.tapr.org/dcc/2000.dcc.speakers.pdf

Speaking schedule (subject to change) is available from ftp://ftp.tapr.org/dcc/2000.dcc.schedule.pdf

APRS Seminar - Friday September 22, 2000

John Ackerman, N9UR	APRS WG
Steve Bible, N7HPR	T-238 Weather Station
John Blowsky, KB2SCS	APRS LOOKUP
Bob Bruninga, WB4APR	APRSdos, satellite, etc.
Steve Dimse, K4HG	Internet APRS
Walter Dunckel, KD6VYV	Serial Control of D7/D700
John Hansen, W2FS	KISS TNC, D700 Keyboard
Dale Huguley, KG5QD	Weather Server
Larry Gahagan, AB0JM	Wildfire Support

Byon Garranrant, N6BG   TinyTrack
Mike Musick, N0QBF   PalmAPRS/Tracker construction
Robert Osband, N4SCY   Public Service with APRS
Tom Schaefer, NY4I   APRS Email Gateway
Darryl Smith, VK2TDS   APRS in the 2000 Olympics
The Sprouls, WU2Z/KB2ICI Mac/Win/XAPRS
Rob Wittner, KZ5RW   APRS-CE

Main Session, Paper Presentation - Saturday 23, 2000
Titles and abstracts are available at
http://www.tapr.org/tapr/html/Fcnc19.html

EasyTrak, A PIC Based Rotor/Radio Controller Interface
By Steve Bible N7HPR

APRS Tiny Web Pages
By Bob Bruninga WB4APR

Channel Capacity Simulation of Peer-to-Peer Spread Spectrum Satellite
Transponders
By Matthew Ettus N2MJI

Correlation for Direct Sequence Spread Spectrum
By Panagiotis Gavalas

PIC-et Radio II: How to Receive AX.25 UI Frames Using Inexpensive PIC
Microcontrollers
By John A. Hansen W2FS

Winlink 2000 ...A Global Ham Message Transfer and Deliver Network
By Hans Kessler N8PGR, Vic Poor W5SMM, Rick Muething KN6KZB, and Steve
Waterman K4CJX

Frequency Offset Acquisition and Tracking Algorithms, Part 1 and Part 2
By Mohamed K. Nezami

APRS and the TAPR EasyTrak Az/El Rotor Control System
By Keith Sproul WU2Z

APRS and Kenwood TM-D700 Voice Messaging
By Keith Sproul WU2Z and Mark Sproul KB2ICI

Internet Wide Callsign Database using LDAP
By Mark Sproul KB2ICI

Automatic Voice Relay System
By Bob Bruninga WB4APR

Introductory Sessions - Saturday 23, 2000

Intro to Packet Radio
By John Ackerman, N8UR

Intro to APRS
By Guy Story, KC5QOI

Intro to Digital Satellites
By Barry Baines, WD4ASW

Into to HF Digital
TBD

Intro to Software Defined Radios
By Steve Bible, N7HPR

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

31. [ss] Re: direct sequence ss code

From: "Fernando M. I. Carreiro" <fmi@carreiro.com>
Date: Tue, 19 Sep 2000 02:21:25 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "\"Jane Johnson\"" <rosancocho@yahoo.com>
Message-ID: <LYR6751-110029-2000.09.18-20.51.44--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Hi, Jane,

I am not too familiar with MatLab, and your description below is too simplified in order to detect a error. I am no wiz in mathematics or ss, but can do my share. If you can send me more details or the MatLab files, I can take a look at them for you.

You could also take a look at the SS details and examples on the ARRL Handbook or CD for more details. If you don't have access to it, I can try extract the part of the CD text and graphics and send it to you.

Also, I noticed that you did not make any mention of syncronasation of the stream with the PN sequence for demodulation. I assume you have all the data already in sync. If not, you will have to add that part so as to sync the incoming stream with the PN sequence in order to retrive the data!

Note also that the data rate is not usually the same as the PN rate (eg. PN rate could be 4x data rate). You probably already doing that, but since you did not mention it, I wondered! In the case of PN = 4x data rate, a PN sequence of 7 bits is a bit short for real-life practical SS.

The best would be for you to send more details. You can send it directly to me if you prefer (fmi@carreiro.com)

Fernando Carreiro (fmi@carreiro.com) ZS6BLF

----- Original Message -----
From: "Jane Johnson" <rosancocho@yahoo.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Friday, September 15, 2000 7:13 PM
Subject: [ss] direct sequence ss code

Hi,
I am a student at UC Davis. I just started learning
about ss. This question is probably too elementary for
the type of things you do, but if someone could help
me I would appreciate it very much.
I am writing a code in Matlab to do direct sequence ss
using a simple BPSK mod/demod scheme. I'll number some
of the steps I am doing and you could tell me if I am
doing something wrong:
1) I have a pseudo-random sequence of length 7
(+/-1's).
2) create message to send, of +/-1's, and repeat each
one of them 7 times so that the ratio of their periods
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This code doesn't seem to work for me. If you are
interested in the files I can send them to you or if
you know of a code I could look at, preferably witten
in Matlab,I would appreciate any help.
Thank you very much

_____
Do You Yahoo!?
Yahoo! Mail - Free email you can access from anywhere!
http://mail.yahoo.com/

You are currently subscribed to ss as: fmi@carreiro.com
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

32. [ss] 2.4 ghz amps

From: "Eric S. Johansson" <esj@harvee.billerica.ma.us>
Date: Fri, 29 Sep 2000 18:21:24 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-111928-2000.09.29-17.29.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.4atv.com/atvprod.htm

these folks ship 2.4 GHz a TV equipment. At the bottom of this page, there
are two amplifiers, one 800 mw and the other one watt. These might be
useful for experimentation with 2.4 GHz spread spectrum units.

---eric

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] What this SIG is for

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Fri, 29 Sep 2000 23:41:28 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-111965-2000.09.29-23.49.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Some time ago I made a few post about using part 15 wireless ethernet
card for amateur radio. It turned into a heated discussion where;

One gentlemen thought my ideas belonged in the networking sig.
I see packet mentioned several times below. So I am re-posting this.

Also waiting to see reports on anyone else using part 15 WLAN devices.

Spread Spectrum SIG
This mailing list is for the discussion of topics related to the
application of spread spectrum communications technology to amateur
packet radio networking. The emphasis of this SIG is on the technology
of spread spectrum rather than regulatory or political issues. Suitable
topics include:
New SS chipsets and modem products, and their applicability to the
amateur service
Performance reports on existing products (e.g., Part 15 WLAN devices)

Relative merits of direct sequence, frequency hopping and hybrid
approaches in amateur SS applications

Use of CDMA and other multiple access techniques to build packet radio
LANs/MANs

Dealing with shared allocations and interference in the UHF and higher
amateur bands

Proposals for development projects in amateur packet SS

Sources of SS information on the Internet and elsewhere: books,
articles, web pages, FAQ files, etc

Steve Lampereur, KB9MWR
http://www.qsl.net/kb9mwr/wireless.html

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

34. [ss] Re: What this SIG is for

From: "Chris Arndt" <carndt@slonet.org>
Date: Fri, 29 Sep 2000 22:51:48 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-111995-2000.09.30-01.01.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, while I haven't pushed any of my gear beyond Part 15 into amateur
service, I'm using:

Cisco Aironet 2.4 gig gear (BR 340s) for my Internet connection to a very
understanding and interested ISP. It takes 2 hops to get there (2.5 and

about .75 miles), due to trees. Full time, static IP, 10bT speed to the ISP
and my website, and I share their T1 from there.

Lucent Orinoco 2.4 gig RG-1000 Residential Gateway and 2 PCMCIA cards
in/around the house to connect 2 notebooks to our wired LAN and thence to
the Internet via the Cisco stuff. The Lucent and Cisco gear seem to get
along just fine. I have taken a notebook a few hundred feet from the house
OK, as long as the path is pretty much LOS and I'm careful about gateway
placement. 2.4 gig doesn't like low E(missivity) metalized glass much. :-)
I covered the Orinoco equipment in this month's PC Networking column in
Electronic House magazine.

NovaRoam 900 meg Wireless Routers. I'm experimenting with these. They are
more involved to use than the 2.4 gig stuff, since they are routers and
need to have their internal routing tables, the firewall's routing tables,
and the lmhost files of affected computers adjusted for the connectivity
desired. Their speed is adjustable and maxes out at 1.003 mb. They run up
to 800 mw or so, and will go a ways, being less susceptible to the stuff
that kills 2.4. I've run them an honest 4.3 miles LOS at top speed, and I'm
sure they'll go farther. I just need to find a longer path. I'm thinking
about using them to add my wife's office and a relative's house to our home
network. Like the Cisco bridges, they have 10bT ports on them, so they are
a little more flexible to use, not needing a card slot in a PC. I have
actually run an Axis 2100 network camera over a Nova link several miles at
about 2 frames per second. The newer NovaRoams do on-the-fly ad hoc
routing, and are designed for a mobile environment. I can't wait to try
that. I have wondered recently about the possibility of using an outboard
amp on the Novas to run them in Amateur service. I have some old Motorola
DARCOM MAS data radios with 5 watt amplifiers on them.

73,

Chris KD6DSI

********** REPLY SEPARATOR **********

On 9/29/00, at 9:44 PM, Steve Lampereur wrote:

>Some time ago I made a few post about using part 15 wireless ethernet
>card for amateur radio. It turned into a heated discussion where;
>
>One gentlemen thought my ideas belonged in the networking sig.
>I see packet mentioned several times below. So I am re-posting this.
>
>Also waiting to see reports on anyone else using part 15 WLAN devices.
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>Spread Spectrum SIG
>This mailing list is for the discussion of topics related to the
>application of spread spectrum communications technology to amateur
>packet radio networking. The emphasis of this SIG is on the technology
>of spread spectrum rather than regulatory or political issues. Suitable
>topics include:
>New SS chipsets and modem products, and their applicability to the
>amateur service
>Performance reports on existing products (e.g., Part 15 WLAN devices)
>
>Relative merits of direct sequence, frequency hopping and hybrid
>approaches in amateur SS applications
>
>Use of CDMA and other multiple access techniques to build packet radio
>LANs/MANs
>
>Dealing with shared allocations and interference in the UHF and higher
>amateur bands
>
>Proposals for development projects in amateur packet SS
>
>Sources of SS information on the Internet and elsewhere: books,
>articles, web pages, FAQ files, etc
>
>Steve Lampereur, KB9MWR
>http://www.qsl.net/kb9mwr/wireless.html
>
>
>---
>You are currently subscribed to ss as: carndt@slonet.org
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] Re: 2.4 ghz amps

From: "Chris Arndt" <carndt@slonet.org>
Date: Fri, 29 Sep 2000 22:57:39 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-111997-2000.09.30-01.06.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.hyperlinktech.com/ also makes amps, connectors etc, just for the
2.4 gig SS stuff. I have a couple of amps here for a test next week with
some Lucent gear.

********** REPLY SEPARATOR **********

On 9/29/00, at 6:21 PM, Eric S. Johansson wrote:

>http://www.4atv.com/atvprod.htm
>
>these folks ship 2.4 GHz a TV equipment. At the bottom of this page,
there
>are two amplifiers, one 800 mw and the other one watt. These might be
>useful for experimentation with 2.4 GHz spread spectrum units.
>
>---eric
>
>
>---
>You are currently subscribed to ss as: carndt@slonet.org
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] Re: 2.4 ghz amps

From: "Shawn T. Rutledge" <rutledge@cx47646-a.phnx1.az.home.com>
Date: Fri, 29 Sep 2000 23:17:27 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-111998-2000.09.30-01.25.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Sep 29, 2000 at 10:57:39PM -0700, Chris Arndt wrote:
> http://www.hyperlinktech.com/ also makes amps, connectors etc, just for the
> 2.4 gig SS stuff. I have a couple of amps here for a test next week with
> some Lucent gear.

That's an impressive vertical antenna they've got! I wonder how many
miles that would be good for.

The amps are more expensive though.

--
  _______   Shawn T. Rutledge / KB7PWD ecloud@bigfoot.com
 (_ | |_)   http://www.bigfoot.com/~ecloud kb7pwd@kb7pwd.ampr.org
  __) | | ____
Get money for spare CPU cycles at http://www.ProcessTree.com/?sponsor=5903

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

37. [ss] SS radiomodems

From: "(SV2AGW)George Rossopoulos" <sv2agw@pigeon.ee.auth.gr>
Date: Sat, 30 Sep 2000 22:01:12 +0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112054-2000.09.30-14.14.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi

Does anyone know if there are any ss radiomodems in reasonable(low!!)
price??

Dont care much for speed even 28.8kbs is enough.
Thanks in advance.
73

(SV2AGW)George Rossopoulos
http://www.elcom.gr/sv2agw
http://www.raag.org/sv2agw
sv2agw@pigeon.ee.auth.gr
tel +30 31 302911
George Rossopoulos
Nikanoros 59
54250,Thessaloniki
Greece

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

38. [ss] Re: SS radiomodems

From: "Chris Arndt" <carndt@slonet.org>
Date: Sat, 30 Sep 2000 12:41:26 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112057-2000.09.30-14.49.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Along with the ethernet equipment I wrote about yesterday, there are a
couple of other RF data devices I have been working with lately.

Wireless Mountain Labs, www.wirelessmountain.com, has 2 serial radio
modems. The Unilink is entirely contained in a DB9 shell and is port
powered. It's serial rating is 9066 baud, but the RF data rate I beleive to
be 4800. It's good for a couple hundred feet. I think they cost less than
US$200 each.

The Power Rover is higher power, higher speed, bigger package, 115k serial,
45K(?) RF data. Will go several miles with proper antennas. Also more
expensive, retail US$849.

One cool thing we found out about the Unilinks and Power Rovers. Since the
RF speed is constant, they can be used as data rate converters, if you had
2 devices to connect that you could not set to a common speed.

Both of these are in the 902-928 license free band, so their legality
outside the US or Morth America is questionable.

)They also list an Etherlink license free 24 ghz ISM license free band
wireless ethernet radio. I have yet to get my hands on one, but I
understand they are expensive.)

Microwave Data Systems, formerly Applied Broadband, also has some 902-928
freq hoppers. More pricy, over a US kilo$, last time I bought some.

********** REPLY SEPARATOR **********

On 9/30/00, at 12:11 PM, (SV2AGW)George Rossopoulos wrote:

>Hi
>
>Does anyone know if there are any ss radiomodems in reasonable(low!!)
>price??
>Dont care much for speed even 28.8kbs is enough.
>Thanks in advance.
>73
>
>(SV2AGW)George Rossopoulos
>http://www.elcom.gr/sv2agw
>http://www.raag.org/sv2agw
>sv2agw@pigeon.ee.auth.gr
>tel +30 31 302911
>George Rossopoulos
>Nikanoros 59
>54250,Thessaloniki
>Greece

>
>
>
>
>---
>You are currently subscribed to ss as: carndt@slonet.org
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October 2000

Original source file: ss.0010
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0010

1. [ss] Re: SS radiomodems

From: "Steve Sampson" <S.Sampson@radio-link.net>
Date: Sun, 1 Oct 2000 22:34:07 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <sv2agw@pigeon.ee.auth.gr>
Message-ID: <LYR6751-112316-2000.10.01-22.45.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Does anyone know if there are any ss radiomodems in reasonable(low!!)
> price??
> Don't care much for speed even 28.8kbs is enough.

I'm using the Proxim bridge for a 5 mile link. These are kind of nice, as
they put out 500 mW, and connected up to a parabolic dish pretty
much bring down any airplanes that get in the beam :-)

I wouldn't call these cheap, but they do pay for themselves in less
than a year, compared to ISDN. I get about 30 k bytes per/sec on
the link. Should be 60 k bytes, so it is downshifting at a variable
rate due to a non-perfect path (need more altitude). About $380 USD.

My travails (hmm, not a good word, I didn't work *that* hard) are
at: http://www.radio-link.net/link.html

By the way, the 2.4 GHz amps someone pointed out earlier, probably
wouldn't be useful for a SS radio, as the ATV system doesn't have
fast switching as a design element. I think I may buy one just to
measure the switching time. I could always run a separate PTT line
up to the roof :-)

Steve
P.S. I use your AGWPE software for my APRS George. Good stuff, thanks!

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] Re: SS radiomodems

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 2 Oct 2000 06:58:02 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112382-2000.10.02-08.38.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Take a look at our web site... but speed is substantially greater (OTA of
460.8 kb; I/O port rate of 230.4 kb).

Regards & 73,

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
5375 Oakbrook Parkway
Norcross, GA 30093, USA
Direct Pho: 678.684.2011
Main Pho: 678.684.2000
Fax: 678.684.2001
Cellular Phone: 678.429.2124

E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com

Visit with us...

ENTELEC & UTC Joint Seminar
Booth T-20
15 - 17 October, 2000
Houston, TX - USA

----- Original Message -----
From: "(SV2AGW)George Rossopoulos" <sv2agw@pigeon.ee.auth.gr>

To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Saturday, September 30, 2000 3:01 PM
Subject: [ss] SS radiomodems

: Hi
:
: Does anyone know if there are any ss radiomodems in reasonable(low!!)
: price??
: Dont care much for speed even 28.8kbs is enough.
: Thanks in advance.
: 73
:
: (SV2AGW)George Rossopoulos
: http://www.elcom.gr/sv2agw
: http://www.raag.org/sv2agw
: sv2agw@pigeon.ee.auth.gr
: tel +30 31 302911
: George Rossopoulos
: Nikanoros 59
: 54250,Thessaloniki
: Greece
:
:
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: SS radiomodems

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 2 Oct 2000 07:03:48 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112386-2000.10.02-08.43.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Take a look @ our web site & for wireless Ethernet specifically, take a look
at the SEM-2410 & SNAP-2410.

Yep, the assumption about 900 MHz ISM band being illegal outside of North
American continent is 100% correct! This is one of several reasons we
discontinued our 900 MHz ISM band product line and now all products are in
the 2.4 GHz ISM band... (ONLY frequency hoppers & NO direct sequence).

Have not only FCC approvals but ETSI approvals, as well!

Regards & 73,

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
5375 Oakbrook Parkway
Norcross, GA 30093, USA
Direct Pho: 678.684.2011
Main Pho: 678.684.2000
Fax: 678.684.2001
Cellular Phone: 678.429.2124

E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com

Visit with us...

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Houston, TX - USA

----- Original Message -----
From: "Chris Arndt" <carndt@slonet.org>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>

Sent: Saturday, September 30, 2000 3:41 PM
Subject: [ss] Re: SS radiomodems

: Along with the ethernet equipment I wrote about yesterday, there are a
: couple of other RF data devices I have been working with lately.
:
: Wireless Mountain Labs, www.wirelessmountain.com, has 2 serial radio
: modems. The Unilink is entirely contained in a DB9 shell and is port
: powered. It's serial rating is 9066 baud, but the RF data rate I beleive
to
: be 4800. It's good for a couple hundred feet. I think they cost less than
: US$200 each.
:
: The Power Rover is higher power, higher speed, bigger package, 115k
serial,
: 45K(?) RF data. Will go several miles with proper antennas. Also more
: expensive, retail US$849.
:
: One cool thing we found out about the Unilinks and Power Rovers. Since the
: RF speed is constant, they can be used as data rate converters, if you had
: 2 devices to connect that you could not set to a common speed.
:
: Both of these are in the 902-928 license free band, so their legality
: outside the US or Morth America is questionable.
:
:)They also list an Etherlink license free 24 ghz ISM license free band
: wireless ethernet radio. I have yet to get my hands on one, but I
: understand they are expensive.)
:
: Microwave Data Systems, formerly Applied Broadband, also has some 902-928
: freq hoppers. More pricy, over a US kilo$, last time I bought some.
:
:
:
:
: ********** REPLY SEPARATOR **********
:
: On 9/30/00, at 12:11 PM, (SV2AGW)George Rossopoulos wrote:
:
: >Hi
: >
: >Does anyone know if there are any ss radiomodems in reasonable(low!!)
: >price??
: >Dont care much for speed even 28.8kbs is enough.
: >Thanks in advance.
: >73
: >
: >(SV2AGW)George Rossopoulos
: >http://www.elcom.gr/sv2agw
: >http://www.raag.org/sv2agw
: >sv2agw@pigeon.ee.auth.gr
: >tel +30 31 302911
: >George Rossopoulos
: >Nikanoros 59
: >54250,Thessaloniki
: >Greece
: >
: >
: >
: >
: >---
: >You are currently subscribed to ss as: carndt@slonet.org
: >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Critique of VMSK

From: Phil Karn <karn@ka9q.net>
Date: Mon, 2 Oct 2000 16:25:09 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112451-2000.10.02-18.33.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've started a page on my website that debunks VMSK. It's still a work
in progress, but I wanted to get it out there because I'm starting to
get questions about it.

http://people.qualcomm.com/karn/papers/vmsk.html

--Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] Re: SS radiomodems

From: "Graeme Zimmer" <gzimmer@bigpond.com>
Date: Tue, 3 Oct 2000 10:04:11 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112546-2000.10.03-00.55.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi,

> Yep, the assumption about 900 MHz ISM band being illegal outside of North
> American continent is 100% correct!

Not so.....

Is legal in Australia ....

(albeit with slightly different band edges)

.... Zim

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: SS radiomodems

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Tue, 3 Oct 2000 10:06:36 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112580-2000.10.03-09.15.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sorry... OM... better check the recent changes by the Aussie government and
take a look at all the exceptions!

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
5375 Oakbrook Parkway
Norcross, GA 30093, USA
Direct Pho: 678.684.2011
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Cellular Phone: 678.429.2124

E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com

Visit with us...

ENTELEC & UTC Joint Seminar
Booth T-20
15 - 17 October, 2000
Houston, TX - USA

----- Original Message -----
From: "Graeme Zimmer" <gzimmer@bigpond.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Monday, October 02, 2000 8:04 PM
Subject: [ss] Re: SS radiomodems

: Hi,
:
: > Yep, the assumption about 900 MHz ISM band being illegal outside of
North
: > American continent is 100% correct!
:
: Not so.....
:
: Is legal in Australia ....
:
: (albeit with slightly different band edges)
:
: .... Zim
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: SS radiomodems

From: <xtr98002001@xtra.co.nz>
Date: Tue, Oct 3 2000 18:55:11 GMT+0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112607-2000.10.03-14.03.43--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>
>From: "Graeme Zimmer" <gzimmer@bigpond.com>
>Date: Tue, 3 Oct 2000 10:04:11 +1000
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Subject: [ss] Re: SS radiomodems
>
>Hi,
>
>> Yep, the assumption about 900 MHz ISM band being illegal outside of North
>> American continent is 100% correct!
>
>Not so.....
>
>Is legal in Australia ....
>
>(albeit with slightly different band edges)
>
>................. Zim
>***** and also in NZ too.. mike ZL1BTB
>
>---
>You are currently subscribed to ss as: PINFOLD@XTRA.CO.NZ
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] VMSK critique updated

From: Phil Karn <karn@ka9q.net>
Date: Tue, 3 Oct 2000 23:38:18 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: pegasusdat@aol.com, ednstrassberg@cahners.com, ftirpak@maximsys.com
Message-ID: <LYR6751-112740-2000.10.04-01.47.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm continuing to revise and extend my technical critique of VMSK:

http://people.qualcomm.com/karn/papers/vmsk.html

I now present two different analyses of power efficiency that give
identical results: VMSK with +/- 1/16 bit of shifting is worse than

coherent BPSK by a factor of 8 (9 dB).

I also did some more web searching, as I was stunned to get 423 hits
for "VMSK" on Yahoo. Most appear to be run by individuals who have
bought into AlphaCom's multilevel marketing scheme for this crap.

I have to say that this sort of thing really makes me mad, and it only
makes me redouble my efforts to put this turkey to rest.

Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Re: ss digest: October 03, 2000

From: "Andre Mauricio Salvagnini" <asalvag@fazenda.sp.gov.br>
Date: Wed, 04 Oct 2000 10:02:58 -0300
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-112803-2000.10.04-08.02.37--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

And is legal in Brazil too.

Andre Salvagnini
PY2NMB
asalvag@fazenda.sp.gov.br

TAPR Spread Spectrum Special Interest Group digest wrote:

> TAPR Spread Spectrum Special Interest Group Digest for Tuesday, October 03, 2000.
>
> 1. Re: SS radiomodems
> 2. Re: SS radiomodems
> 3. Re: SS radiomodems
>
> ---
>
> Subject: Re: SS radiomodems
> From: "Graeme Zimmer" <gzimmer@bigpond.com>
> Date: Tue, 3 Oct 2000 10:04:11 +1000
> X-Message-Number: 1
>
> Hi,
>
> > Yep, the assumption about 900 MHz ISM band being illegal outside of North
> > American continent is 100% correct!
>
> Not so.....
>
> Is legal in Australia ....
>
> (albeit with slightly different band edges)
>
> ..... Zim
>
> ---
>
> Subject: Re: SS radiomodems
> From: "Paul McInnish" <pmcinnish@digiwrls.com>
> Date: Tue, 3 Oct 2000 10:06:36 -0400
> X-Message-Number: 2
>
> Sorry... OM... better check the recent changes by the Aussie government and
> take a look at all the exceptions!
>
> Paul McInnish - K4BET
> Manager, Business Development
> Digital Wireless Corp.
> 5375 Oakbrook Parkway
> Norcross, GA 30093, USA

> Direct Pho: 678.684.2011
> Main Pho: 678.684.2000
> Fax: 678.684.2001
> Cellular Phone: 678.429.2124
>
> E-mail: k4bet@digital-wireless.com
> http://www.digital-wireless.com
>
> Visit with us...
>
> ENTELEC & UTC Joint Seminar
> Booth T-20
> 15 - 17 October, 2000
> Houston, TX - USA
>
> ----- Original Message -----
> From: "Graeme Zimmer" <gzimmer@bigpond.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Monday, October 02, 2000 8:04 PM
> Subject: [ss] Re: SS radiomodems
>
> : Hi,
> :
> : > Yep, the assumption about 900 MHz ISM band being illegal outside of
> North
> : > American continent is 100% correct!
> :
> : Not so.....
> :
> : Is legal in Australia ....
> :
> : (albeit with slightly different band edges)
> :
> : .... Zim
> :
> :
> : ---
> : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> :
>
> --
>
> Subject: Re: SS radiomodems
> From: <xtr98002001@xtra.co.nz>
> Date: Tue, Oct 3 2000 18:55:11 GMT+0000
> X-Message-Number: 3
>
> >
> >From: "Graeme Zimmer" <gzimmer@bigpond.com>
> >Date: Tue, 3 Oct 2000 10:04:11 +1000
> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >Subject: [ss] Re: SS radiomodems
> >
> >Hi,
> >
> >> Yep, the assumption about 900 MHz ISM band being illegal outside of North
> >> American continent is 100% correct!
> >
> >Not so.....
> >
> >Is legal in Australia ....
> >
> >(albeit with slightly different band edges)
> >
> >................... Zim
> >***** and also in NZ too.. mike ZL1BTB
> >
> >---
> >You are currently subscribed to ss as: PINFOLD@XTRA.CO.NZ
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >
> >
>
> ---
>
> END OF DIGEST
>
> ---

> You are currently subscribed to ss as: asalvag@fazenda.sp.gov.br
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] VMSK rebuttal updated

From: Phil Karn <karn@ka9q.net>
Date: Mon, 9 Oct 2000 17:57:23 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114017-2000.10.09-20.06.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've posted another version of my VMSK rebuttal. The URL has changed to

http://people.qualcomm.com/karn/papers/vmsk

The old URL will give a link to the new one.

This version adds a section of footnotes, and a detailed discussion of
filtering and the Nyquist theorem. Among other things, it shows that
at best, VMSK is nothing more than BPSK plus a strong spectral line
that wastes most of the transmitter power. And it shows what would
happen if you really did try to filter VMSK to 90 bps/Hz.

Of course, the main conclusion is unchanged. VMSK is worthless as
a bandwidth reduction technique.

--Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: VMSK rebuttal updated

From: Pete Nolan <pete@nolan-jaska.com>
Date: Mon, 09 Oct 2000 23:48:58 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114074-2000.10.10-01.54.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hey folks,

I recently came across another interesting new comm technology being
pushed by a company named "Time Domain Corp" in Alabama, "ultra wideband
modulation". There is a copy of an EE Times article below; the performance
claims sound a little bit like VMSK (maybe not quite as extreme), but I
don't know anything about the technology. The company seems to be in a
patent dispute with Lawrence Livermore labs. Anybody know anything about
this technology or the company - is it for real?

Pete

Here's a link to another article, I'm sure you can find lots more on
the web: http://www.uventures.com/links_resources/11_99_02.html

Ultrawideband radio attacks spectrum drought

By Ian Cameron, Electronics Times
EE Times
09/26/00, 4:56 p.m. EST

LONDON Ultrawideband communications, which
uses timed high-frequency pulses to transmit over
radio rather than conventional continuous modulated
signals, may be one of the communications industry's
best-kept secrets. But it won't stay that way for
long, according to the company developing the
pulse-timing technology, which it describes as the
answer to just about every communications
issue around.

"It's like the Internet in the early 1990s this is
the dynamic," said Ralph Petroff, president and chief
executive officer of Time Domain Corp. (Huntsville,

Ala.). "[But] right now people are scratching their heads. If anything, the potential for ultrawideband has been underhyped."

For starters, Petroff said the technology could solve "spectrum drought," which he called "the only thing that can slow down the wireless industry and bring it to its knees we are running out of spectrum."

Petroff believes it's possible to get 10 to 30 times the number of equivalent communications channels into the same spectrum when using ultrawideband's pulsed techniques rather than conventional signaling. He anticipates the advent of ultrawideband systems in three years or less.

In May the U.S. Federal Communications Commission issued a Notice of Proposed Rulemaking for the technology in essence, a proposal to consider permitting use of the technology on an unlicensed basis. This is seen as a stepping stone toward a final rule for its deployment "in a manner compatible with existing radio services," though the FCC has advised that further research and testing are needed in bands below 2 GHz. Test results are expected by late next month.

Petroff described ultrawideband as "a radio world in which everything is backwards. It's radio without continuous sine waves, without assigned frequencies, without resonance or power amplifiers" a place where the multipath interference problems that dog many radio technologies are "not an enemy, but a friend."

Applications range from enhancing videogames so that people can play against each other across whole neighborhoods to more serious uses. The technology has been on trial with U.S. emergency services. Time Domain received a waiver last year from the FCC to produce 2,500 RadarVision devices "through-wall" motion detectors that can report the location of people. One possible use of a solids-penetrating radar system is to find survivors after earthquakes and other disasters, "using a fraction of the transmission power [of conventional systems]," said Petroff. "It's a better mousetrap."

Ultrawideband can be used for covert communications among law enforcers. It can also distribute wireless services such as phone, cable and computer networking throughout a building. The U.S. Army Space and Missile Defense Battle Laboratory has tested its use as a local-area network technology.

"Never before has there been a wireless technology that fuses communications, precise positioning and radar," said Petroff.

Noisy effects

Yet for all its promise, ultrawideband has drawn its share of fire, mostly on account of the pervasive effect of the technology on existing communications. The global positioning by satellite (GPS) community and other groups worry that ultrawideband radios could cause interference with their signals.

The GPS consortium, the Federal Aviation Authority, and some cellular telephony and TV operators have complained that large numbers of such systems would cause interference by raising the overall noise floor right across the spectrum.

"I think it's a political issue, not a

technological one. There is no difference in this
and other low-power radio emitters," Petroff said,
citing laptops and palmtops. "The GPS community
would like all these devices to have zero
tolerance. That's not possible."

The pulses in ultrawideband comms are based on
forms known as Gaussian monocycles. The shape of
the monocycle effectively spreads the energy in
each pulse across a bandwidth of about 3 GHz. The
energy cuts across most of the TV bands, cellular
telephony and satellite channels, plus a few
military channels. This is the main reason
ultrawideband has run into problems with other
users.

Time Domain claims that the signals are
undetectable, even at short range, by a receiver
not designed to receive ultrawideband signals,
because the pulses are sent at sub-milliwatt power
levels and the energy is spread across a huge
range.

Petroff now thinks the FCC has been largely
persuaded by ultrawideband's merits: "The
regulatory hurdles are a lot smaller than they
used to be," he said.

Time Domain has raised $70 million so far, and has
spent between $30 million and $40 million on R&D
and intellectual property. Investors include Sony
and telecommunications operator US West. Time
Domain has quadrupled its head count to 200 in the
past year, and is looking to establish offices in
London, Tokyo, Munich and Seattle.

Petroff said the United Kingdom is playing an
important role in bringing the technology to
market in Europe. Racal Research is investigating
how ultrawideband could be used to supplement the
signal from Galileo, the proposed European
equivalent of GPS, inside buildings.

Petroff believes products that incorporate Time
Domain's chip sets, which now exist as prototypes,
will roll out in one to three years.

 Additional reporting by Chris Edwards.

Ian Cameron is business editor of Electronics
Times, EE Times' sister publication in the United
Kingdom.

At 05:57 PM 10/9/00 -0700, Phil Karn wrote:
>I've posted another version of my VMSK rebuttal. The URL has changed to
>
>http://people.qualcomm.com/karn/papers/vmsk
>
>The old URL will give a link to the new one.
>
>This version adds a section of footnotes, and a detailed discussion of
>filtering and the Nyquist theorem. Among other things, it shows that
>at best, VMSK is nothing more than BPSK plus a strong spectral line
>that wastes most of the transmitter power. And it shows what would
>happen if you really did try to filter VMSK to 90 bps/Hz.
>
>Of course, the main conclusion is unchanged. VMSK is worthless as
>a bandwidth reduction technique.
>
>--Phil
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] - Re: VMSK rebuttal updated

From: "Hall, Daniel Ross" <Daniel.Hall@dsto.defence.gov.au>
Date: Tue, 10 Oct 2000 16:42:07 +0930
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114077-2000.10.10-02.25.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

No, I think its genuine enough - the theory seems ok. It sounds damn hard
to implement in hardware though - theres probably limitation they don't tell
you about though.

-----Original Message-----
From: Pete Nolan [mailto:pete@nolan-jaska.com]
Sent: Tuesday, 10 October 2000 16:19
To: TAPR Spread Spectrum Special Interest Group
Subject: [ss] Re: VMSK rebuttal updated

Hey folks,

I recently came across another interesting new comm technology being
pushed by a company named "Time Domain Corp" in Alabama, "ultra wideband
modulation". There is a copy of an EE Times article below; the performance
claims sound a little bit like VMSK (maybe not quite as extreme), but I
don't know anything about the technology. The company seems to be in a
patent dispute with Lawrence Livermore labs. Anybody know anything about
this technology or the company - is it for real?

Pete

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the web: http://www.uventures.com/links_resources/11_99_02.html

Ultrawideband radio attacks spectrum drought

By Ian Cameron, Electronics Times
EE Times
09/26/00, 4:56 p.m. EST

LONDON - Ultrawideband communications, which
uses timed high-frequency pulses to transmit over
radio rather than conventional continuous modulated
signals, may be one of the communications industry's
best-kept secrets. But it won't stay that way for
long, according to the company developing the
pulse-timing technology, which it describes as the
answer to just about every communications
issue around.

"It's like the Internet in the early 1990s - this is
the dynamic," said Ralph Petroff, president and chief
executive officer of Time Domain Corp. (Huntsville,
Ala.). "[But] right now people are scratching their
heads. If anything, the potential for ultrawideband
has been underhyped."

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solve "spectrum drought," which he called "the
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times the number of equivalent communications
channels into the same spectrum when using
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conventional signaling. He anticipates the advent
of ultrawideband systems in three years or less.

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technology - in essence, a proposal to consider
permitting use of the technology on an unlicensed
basis. This is seen as a stepping stone toward a
final rule for its deployment "in a manner
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the FCC has advised that further research and

testing are needed in bands below 2 GHz. Test results are expected by late next month.

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Applications range from enhancing videogames so that people can play against each other across whole neighborhoods to more serious uses. The technology has been on trial with U.S. emergency services. Time Domain received a waiver last year from the FCC to produce 2,500 RadarVision devices - "through-wall" motion detectors that can report the location of people. One possible use of a solids-penetrating radar system is to find survivors after earthquakes and other disasters, "using a fraction of the transmission power [of conventional systems]," said Petroff. "It's a better mousetrap."

Ultrawideband can be used for covert communications among law enforcers. It can also distribute wireless services such as phone, cable and computer networking throughout a building. The U.S. Army Space and Missile Defense Battle Laboratory has tested its use as a local-area network technology.

"Never before has there been a wireless technology that fuses communications, precise positioning and radar," said Petroff.

Noisy effects

Yet for all its promise, ultrawideband has drawn its share of fire, mostly on account of the pervasive effect of the technology on existing communications. The global positioning by satellite (GPS) community and other groups worry that ultrawideband radios could cause interference with their signals.

The GPS consortium, the Federal Aviation Authority, and some cellular telephony and TV operators have complained that large numbers of such systems would cause interference by raising the overall noise floor right across the spectrum.

"I think it's a political issue, not a technological one. There is no difference in this and other low-power radio emitters," Petroff said, citing laptops and palmtops. "The GPS community would like all these devices to have zero tolerance. That's not possible."

The pulses in ultrawideband comms are based on forms known as Gaussian monocycles. The shape of the monocycle effectively spreads the energy in each pulse across a bandwidth of about 3 GHz. The energy cuts across most of the TV bands, cellular telephony and satellite channels, plus a few military channels. This is the main reason ultrawideband has run into problems with other users.

Time Domain claims that the signals are undetectable, even at short range, by a receiver not designed to receive ultrawideband signals, because the pulses are sent at sub-milliwatt power levels and the energy is spread across a huge range.

Petroff now thinks the FCC has been largely persuaded by ultrawideband's merits: "The

regulatory hurdles are a lot smaller than they
used to be," he said.

Time Domain has raised $70 million so far, and has
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and intellectual property. Investors include Sony
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signal from Galileo, the proposed European
equivalent of GPS, inside buildings.

Petroff believes products that incorporate Time
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- Additional reporting by Chris Edwards.

Ian Cameron is business editor of Electronics
Times, EE Times' sister publication in the United
Kingdom.

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>I've posted another version of my VMSK rebuttal. The URL has changed to
>
>http://people.qualcomm.com/karn/papers/vmsk
>
>The old URL will give a link to the new one.
>
>This version adds a section of footnotes, and a detailed discussion of
>filtering and the Nyquist theorem. Among other things, it shows that
>at best, VMSK is nothing more than BPSK plus a strong spectral line
>that wastes most of the transmitter power. And it shows what would
>happen if you really did try to filter VMSK to 90 bps/Hz.
>
>Of course, the main conclusion is unchanged. VMSK is worthless as
>a bandwidth reduction technique.
>
>--Phil
>
>

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---
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13. [ss] Re: VMSK rebuttal updated

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Tue, 10 Oct 2000 06:34:49 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114090-2000.10.10-06.43.42--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Pete Nolan wrote:
>
> Hey folks,
>
> I recently came across another interesting new comm technology being
> pushed by a company named "Time Domain Corp" in Alabama, "ultra wideband
> modulation". There is a copy of an EE Times article below; the performance
> claims sound a little bit like VMSK (maybe not quite as extreme), but I
> don't know anything about the technology. The company seems to be in a
> patent dispute with Lawrence Livermore labs. Anybody know anything about
> this technology or the company - is it for real?

UWB is either the savior of the spectrum crunch... or sparkgap

revisited. Right now, the GPS/GLONAS/GALILEO folks are all worried
because the increase in the noise floor may cause serious problems with
their already shaky link margins (sort of, just-in-time links).

My initial take on this is that the stuff is smoke and mirrors, but the
FCC has issued an NPRM to modify Part 15 to allow them to "test."

If there's comment either way, I need to learn more about this, as I've
been asked to bring some diversity to the GNSS table by some of the
powers that be.

73, gerry n5jxs
--
Gerry Creager -- gerry@cs.tamu.edu
Network Engineering |Research focusing on
Academy for Advanced Telecommunications |Satellite Geodesy and
and Learning Technologies |Geodetic Control
Texas A&M University   979.458.4020 (Phone) -- 979.847.8578 (Fax)

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14. [ss] Wieband

From: PEGASUSDAT@aol.com
Date: Tue, 10 Oct 2000 19:29:21 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: karn@ka9q.net, ss@lists.tapr.org, PEGASUSDAT@aol.com,
        ednstrassberg@cahners.com, dbabitch@atmel.com, frussle@erols.com,
        feherk@yahoo.com, pbender@qualcomm.com, ftirpak@maximsys.com
Message-ID: <LYR6751-114208-2000.10.10-18.39.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Pete,

This is more up Karn's line than mine. Apparently they have it in operation
and I have no doubt that it works, Karn knows that as the number of users
rises, the total interference level from a zillion chipping sources makes it
increasingly difficult for the individuals, due to the rising backgound
level. I would personally hate to see all the worlds traffic piled on
infinitely wide background noise.

The attached file shows the phasors applicable to VMSK.

I hold Karn's analysis to be incorrect.

HRW
[Attachment: phasors.doc; application/octet-stream; 34,304 bytes]

15. [ss] Re: VMSK rebuttal updated

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Tue, 10 Oct 2000 23:48:32 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114211-2000.10.10-18.58.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

UWB is real but the claims gets overblown. It follows shannon theory and RF
in general. It does interfere with other transmissions to some extent and
if enough
UWB signals exist, then the general noise floor rises...it's a lot like
spread spectrum
in that respect. The big problem is the lack of efficient transmitter and
receiver
systems...leading to excess complexity, power consumption, antenna size,
etc.

I worked on this a bit and hung around one of the original inventors of UWB
for
ground penetrating radar. We built a communication system based on the KK7B
zero IF converter boards and it worked ok for a lab demo application.

jeff

----- Original Message -----
From: "Pete Nolan" <pete@nolan-jaska.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Tuesday, October 10, 2000 2:48 AM
Subject: [ss] Re: VMSK rebuttal updated

Hey folks,

I recently came across another interesting new comm technology being pushed by a company named "Time Domain Corp" in Alabama, "ultra wideband modulation". There is a copy of an EE Times article below; the performance claims sound a little bit like VMSK (maybe not quite as extreme), but I don't know anything about the technology. The company seems to be in a patent dispute with Lawrence Livermore labs. Anybody know anything about this technology or the company - is it for real?

Pete

Here's a link to another article, I'm sure you can find lots more on the web: http://www.uventures.com/links_resources/11_99_02.html

Ultrawideband radio attacks spectrum drought

By Ian Cameron, Electronics Times
EE Times
09/26/00, 4:56 p.m. EST

LONDON - Ultrawideband communications, which uses timed high-frequency pulses to transmit over radio rather than conventional continuous modulated signals, may be one of the communications industry's best-kept secrets. But it won't stay that way for long, according to the company developing the pulse-timing technology, which it describes as the answer to just about every communications issue around.

"It's like the Internet in the early 1990s - this is the dynamic," said Ralph Petroff, president and chief executive officer of Time Domain Corp. (Huntsville, Ala.). "[But] right now people are scratching their heads. If anything, the potential for ultrawideband has been underhyped."

For starters, Petroff said the technology could solve "spectrum drought," which he called "the only thing that can slow down the wireless industry and bring it to its knees - we are running out of spectrum."

Petroff believes it's possible to get 10 to 30 times the number of equivalent communications channels into the same spectrum when using ultrawideband's pulsed techniques rather than conventional signaling. He anticipates the advent of ultrawideband systems in three years or less.

In May the U.S. Federal Communications Commission issued a Notice of Proposed Rulemaking for the technology - in essence, a proposal to consider permitting use of the technology on an unlicensed basis. This is seen as a stepping stone toward a final rule for its deployment "in a manner compatible with existing radio services," though the FCC has advised that further research and testing are needed in bands below 2 GHz. Test results are expected by late next month.

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- "through-wall" motion detectors that can report the location of people. One possible use of a solids-penetrating radar system is to find survivors after earthquakes and other disasters, "using a fraction of the transmission power [of conventional systems]," said Petroff. "It's a better mousetrap."

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"Never before has there been a wireless technology that fuses communications, precise positioning and radar," said Petroff.

Noisy effects

Yet for all its promise, ultrawideband has drawn its share of fire, mostly on account of the pervasive effect of the technology on existing communications. The global positioning by satellite (GPS) community and other groups worry that ultrawideband radios could cause interference with their signals.

The GPS consortium, the Federal Aviation Authority, and some cellular telephony and TV operators have complained that large numbers of such systems would cause interference by raising the overall noise floor right across the spectrum.

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>Of course, the main conclusion is unchanged. VMSK is worthless as
>a bandwidth reduction technique.
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>--Phil
>
>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] Re: Wieband

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Tue, 10 Oct 2000 23:54:22 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114212-2000.10.10-19.04.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have some questions.
What is your financial interest in this technology?
Did you buy a right to distribute? Do you sell rights to distribute?

----- Original Message -----
From: <PEGASUSDAT@aol.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <karn@ka9q.net>; <ss@lists.tapr.org>; <PEGASUSDAT@aol.com>;
<ednstrassberg@cahners.com>; <dbabitch@atmel.com>; <frussle@erols.com>;
<feherk@yahoo.com>; <pbender@qualcomm.com>; <ftirpak@maximsys.com>
Sent: Tuesday, October 10, 2000 7:29 PM
Subject: [ss] Wieband

> Pete,
>
> This is more up Karn's line than mine. Apparently they have it in
operation
> and I have no doubt that it works, Karn knows that as the number of users
> rises, the total interference level from a zillion chipping sources makes
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>
> The attached file shows the phasors applicable to VMSK.
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> I hold Karn's analysis to be incorrect.
>
> HRW
>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] Re: Wieband

From: Phil Karn <karn@ka9q.net>
Date: Tue, 10 Oct 2000 17:22:47 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, feherk@yahoo.com, pbender@qualcomm.com,
"ftirpak@maximsys.com"
<LYR4948-114208-2000.10.10-18.39.20--KARN#QUALCOMM.COM@lists.tapr.org>
(PEGASUSDAT@aol.com)
Message-ID: <LYR6751-114218-2000.10.10-19.32.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>I hold Karn's analysis to be incorrect.

I write a detailed technical analysis with 5800 words and nine figures
and all you can say is that you "hold it to be incorrect"? Care to
explain in more detail? I'd be more than happy to correct any mistakes
that are pointed out and proven to me.

Of course, it would be a lot easier for all involved if you were to
just give up and admit that you don't know what the *hell* you are
doing. If you're interested, I could list a few textbooks on basic
communications theory that I've found very helpful over the years.
I'd start with Stark & Teuter, my grad-school textbook in 1979, which
is where I refreshed my memory about the basic properties of fourier
transforms.

Phil

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: VMSK rebuttal updated

From: Phil Karn <karn@qualcomm.com>
Date: Tue, 10 Oct 2000 17:28:03 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "karn@qualcomm.com"
<LYR4948-114211-2000.10.10-18.58.11--KARN#QUALCOMM.COM@lists.tapr.org>
(jeff@wa1hco.mv.com)
Message-ID: <LYR6751-114220-2000.10.10-19.38.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Actually, as far as I can tell UWB *is* spread spectrum. It's just
taken much further.

With UWB, as with any SS system, there is the question of how
non-cooperating systems on the same band can deal with the near-far
problem. SS works best when it runs on dedicated spectrum and where
the participants cooperate so that each talks only to its nearest
neighbors using the lowest power necessary.

Phil

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19. [ss] Who is Fourier?

From: "Lawrence E. Stoskopf" <stoskopf@tri.net>
Date: Tue, 10 Oct 2000 20:51:00 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114234-2000.10.10-21.04.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil Karn's note on VMSK came just after I wandered through Barnes and
Nobel and happened to see a "Comic Book History of the World" type book
entitled "Who is Fourier? A Mathematical Adventure" by a Japanese group
called the "Transnational College of LEX" where you go to learn 11

languages at once!

Basically, it is 434 illustrated pages for $30 that go from the simplest
of simple to some detailed FFT stuff and back and forth. A neat read.
Won't make you a Phil Karn, but at least you will know the buzz words.
And from a group interested in speech, you can guess the focus of the
book.

Especially neat review for those who like me took their calc from a book
based upon proofs, rather than applications and 40 years ago.

Give it a look.

N0UU

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20. [ss] Re: Wieband

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 11 Oct 2000 15:06:59 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114267-2000.10.10-23.17.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Tue, Oct 10, 2000 at 07:29:21PM -0400, PEGASUSDAT@aol.com wrote:
> I hold Karn's analysis to be incorrect.

But then he is unbiased on this topic. I found his analysis to
be very thorough and quite correct! Can you please refute
his paper, point by point?

Hamish

--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] Re: VMSK rebuttal updated

From: "Darryl Smith" <darryl@radio-active.net.au>
Date: Wed, 11 Oct 2000 20:23:28 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114326-2000.10.11-04.29.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

G'Day All,

I am nowhere in the league of Phil Karn, but here are my comments on the
whole thing...
I just found the WWW site http://members.aol.com/pegasusdat and have decided
to donate my life to acting as a referee for journals and conferences. The
poor guy who wrote this rubbish cannot even get the extensions right on his
documents, let alone get the content right [For those looking, open most of
them in WORD, it will work except for the PDF...]

I like statements like
        We do not like to operate at low bit rates. 64 kb/s is the lowest
        we have used. The IF frequency is 3.9 MHz and the receiver filter
        bandwidth is 640 Hz.

        The demonstration hardware has a maximum data rate of 400 kb/s
        through a filter 4 kHz wide, for a bandwidth efficiency of
        100 b/s/Hz. (IF frequency 24 MHz). The theoretical C/N for this
        bit rate and bandwidth is 4.5 dB.

But is inconsistant with another line in the executive summary
        The bandwidth efficiency (Data Rate/ Filter BW) is determined by
        the available receiver IF filters. At present it is approximately
        90 bits/sec./Hz.

Is it 90 bits/sec/Hz or 100 bits/sec/Hz?

The following statement can be correct, assuming that the BER is 50%...
Otherwise he had redefined the terms...
        The Eb/No values being measured are far below 0 dB. -5 dB is typical.

Phil, is Qualcomm planning to license VMSK/2, since I am sure they are one
of the "Major Cellular Equipment Manufacturers" :-)

        Licenses have been negotiated with operators in several foreign countries
        and are being negotiated with the major cellular equipment manufacturers.

Darryl
Sydney, Australia

Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au for domain names

---
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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] Re: VMSK rebuttal updated

From: Dewayne Hendricks <dewayne@warpspeed.com>
Date: Wed, 11 Oct 2000 02:34:09 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114336-2000.10.11-04.46.19--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 17:28 -0700 10/10/00, Phil Karn wrote:
>Actually, as far as I can tell UWB *is* spread spectrum. It's just
>taken much further.
>
>With UWB, as with any SS system, there is the question of how
>non-cooperating systems on the same band can deal with the near-far
>problem. SS works best when it runs on dedicated spectrum and where
>the participants cooperate so that each talks only to its nearest
>neighbors using the lowest power necessary.

        I'm in agreement with Phil's comments above. If you wish to
find out more about UWB, you can check out the 'UWB Working Group'
website at <http://www.uwb.org>. There, you can find copies of all
of the filings that were made on the FCC's UWB NOI a couple of years
ago.
        The FCC also has a rulemaking going for UWB (NPRM). Reply
comments are due at the end of the month. If you wish to read the
comments that have been filed on this docket, go to the FCC website
and use the ECFS system to pull everything on Docket 98-153.
        There's a lot of material out there on UWB. Go read it and
form your own conclusions about the technology.

-- Dewayne

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] Re: UWB

From: Mike Murphree <murphree1@ispchannel.com>
Date: Wed, 11 Oct 2000 6:43:44 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org
Message-ID: <LYR6751-114374-2000.10.11-08.50.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> From: Phil Karn <karn@qualcomm.com>
> Date: Tue, 10 Oct 2000 17:28:03 -0700 (PDT)

>
> Actually, as far as I can tell UWB *is* spread spectrum. It's just
> taken much further.

That's been my take... sort of like a baseband DC-to-daylight
SS system. They are a local company to where I am and have
been the only one in these parts to openly advertise 6 figure
engineering salaries. Maybe some day I'll get bored of
this space crap, job security, etc, etc...

Mike N4CNW

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] Re: Phasors2

From: PEGASUSDAT@aol.com
Date: Wed, 11 Oct 2000 10:30:13 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com
Message-ID: <LYR6751-114379-2000.10.11-09.39.46--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil,
You ask for the filter sweep, here it is.

I am not about to let you influence any student at any Univ. where there is
open minded studying going on.

HRW
[Attachment: FilterResp.doc; application/octet-stream; 33,792 bytes]

25. [ss] Re: Phasors2

From: Phil Karn <karn@ka9q.net>
Date: Wed, 11 Oct 2000 09:10:07 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com
Message-ID: <LYR6751-114417-2000.10.11-11.23.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>I am not about to let you influence any student at any Univ. where there is
>open minded studying going on.

So you're afraid I might corrupt the minds of those poor young
university grad students? That is simply HILARIOUS!

By the way, here's a message I got last week from a professor at
Temple University. I just got his permission to repeat it. Note that
he had his students do this long before I ever heard of VMSK. Unless,
of course, you assert that my negative vibes traveled back in time and
across the country (by VMSK modulation?) to corrupt the minds of those
poor impressionable students at Temple. --Phil

Date: Fri, 6 Oct 2000 09:24:45 -0400
From: Dennis Silage <silage@astro.temple.edu>
To: karn@ka9q.net
Subject: VMSK

You may be interrested to hear that I assigned VMSK as a simulation project
(using SystemView by Elanix) in our first level grad digital communication
course last year and the students got about the same results as you.

Dennis Silage, PhD   K3DS   silage@vm.temple.edu
Department of Electrical & Computer Engineering
College of Engineering   215-204-6761
Temple University   FAX 215-204-5960
Philadelphia, PA 19122 ARRL AD Atl Div ex G5EMU TUARC K3TU

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] Re: Phasors2

From: Dale Heatherington <dale@wa4dsy.net>
Date: Wed, 11 Oct 2000 14:36:20 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114437-2000.10.11-13.51.47--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, 11 Oct 2000, PEGASUSDAT@aol.com wrote:
>
> Phil,
> You ask for the filter sweep, here it is.
>
> I am not about to let you influence any student at any Univ. where there is
> open minded studying going on.
>
> HRW
>

Hmmm... I see the filter is about 500khz wide at the 30 db down point.
This will knock down the vmsk sidbands by 30 db but they may still
make it through.

Why not use an off the shelf 15 to 20 khz wide crystal filter with flat passband response
and very steep skirts that do down to 60 or 70 db?

--
Dale Heatherington
dale@wa4dsy.net
Web Page http://www.wa4dsy.net
Sent by KMail for Linux

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: Wieband

From: Robert McGwier <rwmcgwier@home.com>
Date: Wed, 11 Oct 2000 20:30:55 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114477-2000.10.11-19.41.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

HRW:

The attached Word document is basically undecipherable mumbo-jumbo
made up of technical words. Can you please give us captions (with some
detail) for the diagrams, and can you point us to the
individuals/institutions
that have made their own C/N, spectral measurements as described in the
word document? Has someone done something as simple as BERT in
simulated Gaussian noise? A document with a simple chart giving these
kinds of numbers would answer loads of questions. My simulations and
measurements, all done in matlab, pretty much follow theory. The total
difference between a zero and a one in your system is carried in the tiniest
sliver where the two states are different. This difference and the energy the
transmitting system gives to this small area of difference is the total energy
available to a statistical decision process to tell the difference between a
zero and a one. As such this system badly underperforms a standard
BPSK signal filtered with a standard RC^1/2 filter in all of my tests. I am
really missing something. Enlighten me.

Bob

At 07:29 PM 10/10/2000 Tuesday, you wrote:
>Pete,
>
>This is more up Karn's line than mine. Apparently they have it in operation
>and I have no doubt that it works, Karn knows that as the number of users
>rises, the total interference level from a zillion chipping sources makes it
>increasingly difficult for the individuals, due to the rising backgound
>level. I would personally hate to see all the worlds traffic piled on
>infinitely wide background noise.
>
>The attached file shows the phasors applicable to VMSK.
>
>I hold Karn's analysis to be incorrect.
>
>HRW

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] Re: ss digest: October 10, 2000

From: Jim Ussailis <ussailis@equinox.shaysnet.com>
Date: Wed, 11 Oct 2000 22:41:22 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss digest recipients <ss@lists.tapr.org>
Message-ID: <LYR6751-114502-2000.10.11-21.49.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Someone asked how to generate wideband modulation...

Back in the 1965 I was part of a crew of two that developed a wideband radar. The method is very simple. One "hits" a coax to waveguide transition with a very short pulse. My part was developing a pulse generator with a 1 nS risetime. Eventually, I got that down to 0.3 nS, which was the risetime of the sampling 'scope that I used to observe the pulse.

I used an avalanch transistor & charge line which I triggered with an ordinary pulse generator.

Later, when I had a Fourier series course, I understood why 0.3 nS was the limit I ran into. That was the limit of the 'scope.

Anyway, the coax to waveguide transition causes the impulse to generate RF, with a center frequency close to the cutoff frequency of the waveguide. The "main bang" of the signal is a bipolar pulse of energy at the RF frequency. However it also has a couple of components that makes it look like a damped wave of years ago.

Of course, by adding a TWT amplifier, antennas, and using the 'scope as a receiver, we developed a radar. This had a interesing curiosity...it penetrated foilage and the ground. We called it a "short-pulse" radar. Now it is called an "impulse radar."

There is a longer interesting story of how we discovered the radar aspect, which I won't cover. It was a true serendipity, however.

Later, I made another of these radars for a RCS measurement range. Here I used a step-recovery diode (SRD) to develop the short pulse. Again, a pulse generator triggers the SRD, which it sent into a coax to waveguide transition. This time I followed it with a short pc of waveguide (for a filter), another transition, and a TWT amplifier. This unit used X-band waveguide (WR-90), which gave a center freq near 7 or 8 GHz, as I recall.

Problems with it...

Range is poor because of the bandwidth involved. Eventually we were running 10 or 20 Watts to get a good dynamic range for measurement. Our "range" was about 20 or 25 feet in the RCS range. For foliage peneration, we did a bit better...about 100 ft. The targets had a higher cross-section!

Of course, the average power on the target is a lot less than 20 W. Because we were using a ordinary pulse generator to get started, we had about a 1000 Hz prf. Couple this with a sub-nS pulse and we had a very, very small duty cycle. This adds up to not much range!

As a communication system...

The only way one could get a reasonable range from this technology in communications is to use some form of pulse compression on the receive side. That is, to process the signal into something with a narrow band like direct-sequence spread-spectrum.

Jim Ussailis
National Wireless, Inc

ussailis@shaysnet.com

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: Phasors2

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Wed, 11 Oct 2000 21:42:28 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114504-2000.10.11-21.52.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

PEGASUSDAT@aol.com wrote:
>
> Phil,
> You ask for the filter sweep, here it is.
>
> I am not about to let you influence any student at any Univ. where there is
> open minded studying going on.

You might not, but having worked with him before, I've found his
engineering analyses to generally be excellent. *MY*& students can
learn from his examples.

That said, thanks for providing the sweep plot. I'll fuss over it some
and see if I can decide, on my own, what I think of it and the concept.
--
Gerry Creager -- gerry@cs.tamu.edu
Network Engineering |Research focusing on
Academy for Advanced Telecommunications |Satellite Geodesy and
and Learning Technologies |Geodetic Control
Texas A&M University   979.458.4020 (Phone) -- 979.847.8578 (Fax)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

30. [ss] Re: ss digest: October 09, 2000

From: "Lord Ferrox Tutinean" <ferrox@hotmail.com>
Date: Thu, 12 Oct 2000 21:08:20 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114628-2000.10.12-16.17.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>From: "TAPR Spread Spectrum Special Interest Group digest"
><ss@lists.tapr.org>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "ss digest recipients" <ss@lists.tapr.org>
>Subject: ss digest: October 09, 2000
>Date: Tue, 10 Oct 2000 00:02:15 -0500
>
>TAPR Spread Spectrum Special Interest Group Digest for Monday, October 09,
>2000.
>
>1. VMSK rebuttal updated
>
>--
>
>Subject: VMSK rebuttal updated
>From: Phil Karn <karn@ka9q.net>
>Date: Mon, 9 Oct 2000 17:57:23 -0700
>X-Message-Number: 1
>
>I've posted another version of my VMSK rebuttal. The URL has changed to
>
>http://people.qualcomm.com/karn/papers/vmsk
>
>The old URL will give a link to the new one.
>
>This version adds a section of footnotes, and a detailed discussion of
>filtering and the Nyquist theorem. Among other things, it shows that
>at best, VMSK is nothing more than BPSK plus a strong spectral line
>that wastes most of the transmitter power. And it shows what would
>happen if you really did try to filter VMSK to 90 bps/Hz.
>
>Of course, the main conclusion is unchanged. VMSK is worthless as
>a bandwidth reduction technique.
>
>--Phil
>
>
>

>---
>
>END OF DIGEST
>
>---
>You are currently subscribed to ss as: ferrox@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
Respectfully:

Phil.
Your analysis is so thorough and compelling that, despite your extremely
noble intent which I UTTERLY respect, it will probably be seen
as,.....hummmmm,...heavy handed bullying by though who failed to even TRY
to educate themselves on what they have been duped into believeing!!!
I have checked your figures,...the Shannon Limit IS THE PROBLEM and question
to be addressed by the VMSK crowd,...I cannot wait to see the responses to
your objections. I will ignore all presidential debates until I hear the end
of this!
LT
_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com.

Share information about yourself, create your own public profile at
http://profiles.msn.com.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

31. [ss] Rebuttal to Karn

From: PEGASUSDAT@aol.com
Date: Fri, 13 Oct 2000 14:20:15 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: karn@ka9q.net, ss@lists.tapr.org, ednstrassberg@cahners.com,
        dbabitch@atmel.com, frussle@erols.com, pete@nolan-jaska.com,
        feherk@yahoo.com, pbender@qualcomm.com, ftirpak@maximsys.com,
        silage@astro.temple.edu, dag@world.std.com
Message-ID: <LYR6751-114811-2000.10.13-13.31.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

To Addressees,

My reply to Karn's analysis is attached.

H.R. Walker
[Attachment: Rebuttal to Karn.doc; application/octet-stream; 238,592 bytes]

32. [ss] Re: Rebuttal to Karn

From: Robert McGwier <rwmcgwier@home.com>
Date: Fri, 13 Oct 2000 14:57:17 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114816-2000.10.13-14.09.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

You have just got to be kidding. Mr. Walker, how much money
have venture capitalist 's put into this technology? The document
you attached is just pure techno-babble. It is without content.

Bob

At 02:20 PM 10/13/2000 Friday, you wrote:
> To Addressees,
>
>My reply to Karn's analysis is attached.
>
>H.R. Walker

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] Re: Rebuttal to Karn

From: "Chris Arndt" <carndt@slonet.org>
Date: Fri, 13 Oct 2000 12:21:11 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114817-2000.10.13-14.31.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Y'know. If this VMSK is all that HRW claims it to be, why doesn't he just
BUILD some of them and PROVE he's right, not in his laboratory, but the
real world?

I stopped reading the "rebuttal" at the very unprofessional "Garbage in,
garbage out" statement. Sheesh...

(And I have no doubt that he may have otherwise reputable investors. If I
was a big corporation, I'd likely throw a few bucks at this and any other
remotely promising new technology "just in case", to secure a place in line
while waiting to get it analyzed or see how it otherwise shakes out.)

********** REPLY SEPARATOR **********

On 10/13/00, at 2:57 PM, Robert McGwier wrote:

>You have just got to be kidding. Mr. Walker, how much money
>have venture capitalist 's put into this technology? The document
>you attached is just pure techno-babble. It is without content.
>
>Bob
>
>
>
>At 02:20 PM 10/13/2000 Friday, you wrote:
>> To Addressees,
>>
>>My reply to Karn's analysis is attached.
>>
>>H.R. Walker
>
>
>
>---
>You are currently subscribed to ss as: carndt@slonet.org
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

34. [ss] Re: Rebuttal to Karn

From: Jake Janovetz <janovetz@uiuc.edu>
Date: Fri, 13 Oct 2000 14:40:24 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: karn@ka9q.net, ednstrassberg@cahners.com, dbabitch@atmel.com,
        frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
        pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
        dag@world.std.com
Message-ID: <LYR6751-114827-2000.10.13-14.49.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Of course, it's written in Microsoft Word, so many of us can't
read it... Oh well...

    Jake

On Fri, Oct 13, 2000 at 02:20:15PM -0400, PEGASUSDAT@aol.com wrote:
> To Addressees,
>
> My reply to Karn's analysis is attached.
>
> H.R. Walker

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] Re: Rebuttal to Karn

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Fri, 13 Oct 2000 15:29:09 -0400

To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <karn@ka9q.net>, <ednstrassberg@cahners.com>, <dbabitch@atmel.com>,
        <frussle@erols.com>, <pete@nolan-jaska.com>, <feherk@yahoo.com>,
        <pbender@qualcomm.com>, <ftirpak@maximsys.com>,
        <silage@astro.temple.edu>, <dag@world.std.com>
Message-ID: <LYR6751-114829-2000.10.13-14.57.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I could not help responding to this comment... sorry! The devil made me do
it! It is Friday the 13th., you know!

The MAJORITY use Microsoft Word so the comment "many of us can't read
it...." is incorrect... should have said "SOME of us can't read it...."

Paul

----- Original Message -----
From: "Jake Janovetz" <janovetz@uiuc.edu>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <karn@ka9q.net>; <ednstrassberg@cahners.com>; <dbabitch@atmel.com>;
<frussle@erols.com>; <pete@nolan-jaska.com>; <feherk@yahoo.com>;
<pbender@qualcomm.com>; <ftirpak@maximsys.com>; <silage@astro.temple.edu>;
<dag@world.std.com>
Sent: Friday, October 13, 2000 3:40 PM
Subject: [ss] Re: Rebuttal to Karn

: Of course, it's written in Microsoft Word, so many of us can't
: read it... Oh well...
:
:   Jake
:
:
: On Fri, Oct 13, 2000 at 02:20:15PM -0400, PEGASUSDAT@aol.com wrote:
: > To Addressees,
: >
: > My reply to Karn's analysis is attached.
: >
: > H.R. Walker
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] Re: Rebuttal to Karn

From: Robert McGwier <rwmcgwier@home.com>
Date: Fri, 13 Oct 2000 18:04:47 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114852-2000.10.13-17.17.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Sun's Staroffice 5.2 will read Microsoft Word documents and it is free on
their web site and for a nominal charge if you can't download the 50+ MB
(on CD-ROM). StarOffice is available for Microsoft Win9X, NT, 2000 or Linux
or Solaris. . . .

Bob

At 03:29 PM 10/13/2000 Friday, you wrote:
>I could not help responding to this comment... sorry! The devil made me do
>it! It is Friday the 13th., you know!
>
>The MAJORITY use Microsoft Word so the comment "many of us can't read
>it...." is incorrect... should have said "SOME of us can't read it...."
>
>Paul
>
>

>----- Original Message -----
>From: "Jake Janovetz" <janovetz@uiuc.edu>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Cc: <karn@ka9q.net>; <ednstrassberg@cahners.com>; <dbabitch@atmel.com>;
><frussle@erols.com>; <pete@nolan-jaska.com>; <feherk@yahoo.com>;
><pbender@qualcomm.com>; <ftirpak@maximsys.com>; <silage@astro.temple.edu>;
><dag@world.std.com>
>Sent: Friday, October 13, 2000 3:40 PM
>Subject: [ss] Re: Rebuttal to Karn
>
>
>: Of course, it's written in Microsoft Word, so many of us can't
>: read it... Oh well...
>:
>:   Jake
>:
>:
>: On Fri, Oct 13, 2000 at 02:20:15PM -0400, PEGASUSDAT@aol.com wrote:
>: > To Addressees,
>: >
>: > My reply to Karn's analysis is attached.
>: >
>: > H.R. Walker
>:
>: ---
>: You are currently subscribed to ss as: k4bet@digital-wireless.com
>: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>:
>:
>
>
>
>---
>You are currently subscribed to ss as: rwmcgwier@home.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

37. [ss] Re: Rebuttal to Karn

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sat, 14 Oct 2000 09:59:14 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114859-2000.10.13-18.09.15--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Oct 13, 2000 at 02:20:15PM -0400, PEGASUSDAT@aol.com wrote:
> To Addressees,
>
> My reply to Karn's analysis is attached.

Questions:

1. "Fact: No one other than Karn attempts to analyze BPSK as Phase
    Modulation." Why isn't an analysis as phase modulation valid? BPSK
    is after all phase shift keying, ie phase modulation.

2. "The modulation index is not 11.25 degrees for a 7,8,9 code, but
    plus or minus 90 degrees, or approximately 1.5 radians. "

    Then in the last paragraph of the last page, you write:
    "The encoding is 7,8,9 VMSK/2. The equivalent phase modulation is
    +- pi/16 radians, or +- 11.25 degrees."

    Why the inconsistency?

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

38. [ss] Re: Rebuttal to Karn

From: "Tom Tishken KD4WOV(laptop)" <kd4wov@earthlink.net>
Date: Fri, 13 Oct 2000 20:27:01 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114872-2000.10.13-20.35.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

50 Megs..... I would rather use the Word Reader it is smaller.

> -----Original Message-----
> From: bounce-ss-12720@lists.tapr.org
> [mailto:bounce-ss-12720@lists.tapr.org]On Behalf Of Robert McGwier
> Sent: Friday, October 13, 2000 6:05 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Rebuttal to Karn
>
>
> Sun's Staroffice 5.2 will read Microsoft Word documents and it is free on
> their web site and for a nominal charge if you can't download the 50+ MB
> (on CD-ROM). StarOffice is available for Microsoft Win9X, NT,
> 2000 or Linux
> or Solaris. . . .
>
> Bob
>
>
>
>
> At 03:29 PM 10/13/2000 Friday, you wrote:
> >I could not help responding to this comment... sorry! The devil
> made me do
> >it! It is Friday the 13th., you know!
> >
> >The MAJORITY use Microsoft Word so the comment "many of us can't read
> >it...." is incorrect... should have said "SOME of us can't read it...."
> >
> >Paul
> >
> >
> >----- Original Message -----
> >From: "Jake Janovetz" <janovetz@uiuc.edu>
> >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> >Cc: <karn@ka9q.net>; <ednstrassberg@cahners.com>; <dbabitch@atmel.com>;
> ><frussle@erols.com>; <pete@nolan-jaska.com>; <feherk@yahoo.com>;
> ><pbender@qualcomm.com>; <ftirpak@maximsys.com>;
> <silage@astro.temple.edu>;
> ><dag@world.std.com>
> >Sent: Friday, October 13, 2000 3:40 PM
> >Subject: [ss] Re: Rebuttal to Karn
> >
> >
> >: Of course, it's written in Microsoft Word, so many of us can't
> >: read it... Oh well...
> >:
> >:   Jake
> >:
> >:
> >: On Fri, Oct 13, 2000 at 02:20:15PM -0400, PEGASUSDAT@aol.com wrote:
> >: > To Addressees,
> >: >
> >: > My reply to Karn's analysis is attached.
> >: >
> >: > H.R. Walker
> >:
> >: ---
> >: You are currently subscribed to ss as: k4bet@digital-wireless.com
> >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> >:
> >:
> >
> >
> >
> >---
> >You are currently subscribed to ss as: rwmcgwier@home.com
> >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
> ---

> You are currently subscribed to ss as: kd4wov@earthlink.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

39. [ss] Re: Rebuttal to Karn

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Sat, 14 Oct 2000 02:29:53 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <karn@ka9q.net>, <ednstrassberg@cahners.com>, <dbabitch@atmel.com>,
        <frussle@erols.com>, <pete@nolan-jaska.com>, <feherk@yahoo.com>,
        <pbender@qualcomm.com>, <ftirpak@maximsys.com>,
        <silage@astro.temple.edu>, <dag@world.std.com>
Message-ID: <LYR6751-114882-2000.10.13-21.40.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you need a microsoft word viewer for MS Windows,
Microsoft makes a free on available at

    http://www.microsoft.com/office/000/viewers.htm

> The MAJORITY use Microsoft Word so the comment "many of us can't read
> it...." is incorrect... should have said "SOME of us can't read it...."
>
> Paul
>
>
> : Of course, it's written in Microsoft Word, so many of us can't
> : read it... Oh well...
> :
> :   Jake

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

40. [ss] Re: Rebuttal to Karn

From: Jake Janovetz <janovetz@uiuc.edu>
Date: Fri, 13 Oct 2000 21:41:00 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114883-2000.10.13-21.50.41--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> 1. "Fact: No one other than Karn attempts to analyze BPSK as Phase
>   Modulation." Why isn't an analysis as phase modulation valid? BPSK
>   is after all phase shift keying, ie phase modulation.

This was interesting to me, as well. In our remedial courses on
comm, we considered BPSK as just a carrier times a +/-1 type
of thing. However, once students matured to a level where they
could grasp phase modulation (which is, arguably, something more
difficult to grasp than AM modulation) BPSK, QPSK, QAM, etc were
all considered the same thing.

Others: Thanks for the MSWord readers. I found one on the web that
will convert them to text...

   Jake

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

41. [ss] Re: Rebuttal to Karn

From: tlang@freeway.apana.org.au (Tony Langdon)
Date: 14 Oct 00 14:24:37 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114933-2000.10.14-00.11.53--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Paul!

13 Oct 00 15:29, you wrote to TAPR Spread Spectrum Special Interest Group:

 PM> I could not help responding to this comment... sorry! The devil made
 PM> me do it! It is Friday the 13th., you know!
 PM>
 PM> The MAJORITY use Microsoft Word so the comment "many of us can't read
 PM> it...." is incorrect... should have said "SOME of us can't read
 PM> it...."

There is a real reason not to use MS Word. There's always the possibility the
document may have picked up a virus somewhere along the way. If you must use a
Microsoft format, RTF is a suggested alternative, as it doesn't carry
potentially dangerous macros.

Tony, VK3JED

.. Look's like it's working now!
--
|Fidonet: Tony Langdon 3:633/284.18
|Internet: tlang@freeway.apana.org.au
|
| Standard disclaimer: The views of this user are strictly his own.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

42. [ss] Re: Rebuttal to Karn--FORM vs. CONTENT

From: Lawrence Gruber <lawrence@javanet.com>
Date: Sat, 14 Oct 2000 02:14:45 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114943-2000.10.14-01.23.23--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hey, Tony, don't be ridiculous. Besides, there is NOTHING in
the way of MACROS in MS WORD. MS WORD is completely devoid of any
macro 'language'. There is, however, something called Visual Basic.

I converted Mr. Walker's attachment to RTF (Rich Text File) format
but it grew into a size of over SIX MEGABYTES!! (and who
want's to download attachments of this size with a 56K modem!)

RTF format has great "difficulty" with graphics.

And, why the heck is almost everybody commenting on the FORM
of H.R. Walker's provocative critique of Phil Karn's analysis,
when it's the CONTENT that should be discussed in this maillist!

Larry Gruber

Ps. I would submit that virtually no one one this maillist is
actually superstitious about the number 13.

At 02:24 PM 10/14/00 +1000, you wrote:
>
>Hello Paul!
>
>13 Oct 00 15:29, you wrote to TAPR Spread Spectrum Special Interest Group:
>
> PM> I could not help responding to this comment... sorry! The devil made
> PM> me do it! It is Friday the 13th., you know!
> PM>
> PM> The MAJORITY use Microsoft Word so the comment "many of us can't read
> PM> it...." is incorrect... should have said "SOME of us can't read
> PM> it...."
>
>There is a real reason not to use MS Word. There's always the possibility the
>document may have picked up a virus somewhere along the way. If you must use a
>Microsoft format, RTF is a suggested alternative, as it doesn't carry
>potentially dangerous macros.
>
>Tony, VK3JED
>
>.. Look's like it's working now!

```
>--
>|Fidonet:  Tony Langdon 3:633/284.18
>|Internet: tlang@freeway.apana.org.au
>|
>| Standard disclaimer: The views of this user are strictly his own.
>
>
>
>---
>You are currently subscribed to ss as: LAWRENCE@JAVANET.COM
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>
>
 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
  Larry (Lawrence) J. Gruber
  Medford, Massachusetts  USA
     lawrence@javanet.com
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~


---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

43. [ss] RE: ss digest: October 13, 2000

```
From: "Darryl Smith" <darryl@radio-active.net.au>
Date: Sat, 14 Oct 2000 17:28:15 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114944-2000.10.14-01.33.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
1: Word Documents
        In accordance with common practice, could all users of the mailing list
refrain from posting WORD documents and attachments to this list and place
the documents on the WWW somewhere with the link. Some of us read the
messages in digest mode, and it is almost impossible to read.

2. Equations for VMSK/2 generation?
        Is it possible to get a time domain equation for VMSK? Is it

        s(t) = sin (wt + kd(t))
        where
                s(t) = modulated signal
                w = frequency in radians of the carier
                d(t) = modulating signal
                k = modulation factor

        If this is not what VMSK/2 is, then what is it?

Many thanks

Darryl

---------
Darryl Smith, VK2TDS   POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au for domain names


---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

44. [ss] Re: Rebuttal to Karn

```
From: Phil Karn <karn@ka9q.net>
Date: Fri, 13 Oct 2000 23:53:09 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
        frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
        pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
        dag@world.std.com, karn@ka9q.net
Message-ID: <LYR6751-114946-2000.10.14-02.05.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

```
As a Linux user, I too find all those Microsoft Word attachments
annoying, especially since they contain little that can't be expressed
in html. But I grit my teeth, fired up VMWare, put Bill Gates in a
box, and used Microsoft Word to convert Walker's file to html
```

format. It's now up on my web page as

http://people.qualcomm.com/karn/papers/vmsk/rebuttal/RebuttalXtoXKarn.htm

There's also a link to this page from the top of my document:

http://people.qualcomm.com/karn/papers/vmsk/index.html

As I am getting married tomorrow (Saturday) I probably won't have the
time to respond right away. But I will...

Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

45. [ss] Re: Rebuttal to Karn--FORM vs. CONTENT

From: tlang@freeway.apana.org.au (Tony Langdon)
Date: 14 Oct 00 20:43:43 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114968-2000.10.14-06.07.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Lawrence!

14 Oct 00 02:14, you wrote to TAPR Spread Spectrum Special Interest Group:

 LG> Hey, Tony, don't be ridiculous. Besides, there is NOTHING in

Who's being ridiculous? Ever heard of the Concept virus? That's just one of
many Word borne viruses, several of which I've seen "in the wild". Some are
benign, others are somewhat more troublesome. I first encountered this class
of virus in 1996, and was aware of them a year to 18 months previously. Suggest
you have a look around any AV vendor's virus information pages.

 LG> the way of MACROS in MS WORD. MS WORD is completely devoid of any
 LG> macro 'language'. There is, however, something called Visual Basic.

That's just a matter of semantics, and if you want to be picky, it's "Visual
Basic for Applications" (VBA). In any case, it's a programming language in
itself, with enough power to execute destructive commands on opening a document
(or any other event the programmer wishes to choose).

 LG> I converted Mr. Walker's attachment to RTF (Rich Text File) format
 LG> but it grew into a size of over SIX MEGABYTES!! (and who
 LG> want's to download attachments of this size with a 56K modem!)

Eeeek! :) OK, so it was a bad call. I'd prefer it in plain text anyway,
though that makes diagrams somewhat tricky....

 LG> Ps. I would submit that virtually no one one this maillist is
 LG> actually superstitious about the number 13.

Hehehe :-)

Tony, VK3JED

.. ad the advertisement."
--
|Fidonet: Tony Langdon 3:633/284.18
|Internet: tlang@freeway.apana.org.au
|
| Standard disclaimer: The views of this user are strictly his own.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

46. [ss] Rebuttal Letter

From: PEGASUSDAT@aol.com
Date: Sat, 14 Oct 2000 11:20:44 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, dbabitch@atmel.com, frussle@erols.com, feherk@yahoo.com,
        ftirpak@maximsys.com, silage@astro.temple.edu, MRJUDD@aol.com
Message-ID: <LYR6751-114994-2000.10.14-10.30.39--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

The following mail has been received-
HRW

BALDWIN SAWYER, D.Sc.
P O Box 96
Gates Mills, Ohio
44040
Oct. 14, 2000

Dan Strassberg, Tech. Editor
EDN

Dear Mr. Strassberg,

Recently, I read your article about VMSK in EDN with some amusement, because you followed a frequent first reaction; which is to question its apparent escape from "Shannon's limit". But now - later - it seems that I am perceiving too many people being led like trusting sheep toward a "snake oil' bandwagon.

While my D.Sc. is in Physics of Materials, from Carnegie Tech, I am not unfamiliar with the science of communication and information theory. After my D.Sc. I spent a considerable number of years at Bell Labs, where I studied with Bill Shockley and met Claude Shannon.

Particularly disturbing is the pretentiously "scientific" Qualcom website article about VMSK. Obviously, Qualcom has a lot to lose if VMSK is successful. Its political attacks start with derogatory epithets followed directly with adverse "conclusions", followed next by attempts to substantiate them. The procedure of building from prejudice instead of from the available evidence pains me as a scientist.

I have witnessed several exhibitions of VMSK's performance in large hotel auditoria. It does not require 300 or so dB of S/N, which would imply a vast amount of power. The VMSK circuits were operating from 9-volt batteries. I saw the spectrum on an analyzer, which was as claimed. The received signal dipped to about -100 dBm before the signal was lost. Since that is only 20 dB above the noise floor, the claims by the man from Qualcom that it cannot operate at low noise levels do not hold up.

While I have not been over his entire math, I do retain the impression that his examples are 'straw men', easily demolished, but not pertaining directly to the true VMSK. There are many who, incredulous at first, have witnessed its reduction to practice and discovered that it does indeed work. The conclusions of the man who has not risked seeing its performance do not agree with the observations and measurements we have seen.

Baldwin Sawyer, D.Sc.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

47. [ss] MS Word...

From: Francis See <francisc@asia.com>
Date: Sat, 14 Oct 2000 23:41:12 +0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-114995-2000.10.14-10.59.46--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi all,

I thought this was a Spread Spectrum forum...why all the fuzz about MSWord?

PLEASE.....enough on the MSWord exchanges.

Thank you....

Francis / DU3HF

At 02:24 PM 10/14/2000 +1000, Tony Langdon wrote:

>Hello Paul!
>
>13 Oct 00 15:29, you wrote to TAPR Spread Spectrum Special Interest Group:
>
> PM> I could not help responding to this comment... sorry! The devil made
> PM> me do it! It is Friday the 13th., you know!
> PM>
> PM> The MAJORITY use Microsoft Word so the comment "many of us can't read
> PM> it...." is incorrect... should have said "SOME of us can't read
> PM> it...."
>
>There is a real reason not to use MS Word. There's always the possibility the
>document may have picked up a virus somewhere along the way. If you must
>use a
>Microsoft format, RTF is a suggested alternative, as it doesn't carry
>potentially dangerous macros.
>
>Tony, VK3JED
>
>.. Look's like it's working now!
>--
>|Fidonet: Tony Langdon 3:633/284.18
>|Internet: tlang@freeway.apana.org.au
>|
>| Standard disclaimer: The views of this user are strictly his own.
>
>
>
>---
>You are currently subscribed to ss as: francisc@asia.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

48. [ss] RE: ss digest: October 13, 2000

From: John Koster <w9ddd@tapr.org>
Date: Sat, 14 Oct 2000 13:16:58 -0500 (CDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115017-2000.10.14-13.26.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sat, 14 Oct 2000, Darryl Smith wrote:

> 1: Word Documents
>   In accordance with common practice, could all users of the mailing list
> refrain from posting WORD documents and attachments to this list and place
> the documents on the WWW somewhere with the link. Some of us read the
> messages in digest mode, and it is almost impossible to read.

Posting of attachments to any of the TAPR list is discouraged. Pointers
to web sites or arrangements to exchange files directly between parties is
the preferred way.

John Koster, W9DDD
<w9ddd@tapr.org>

  ==
None of the above represents the opinion or policy of anyone or any entity
other than John Koster unless expressly so stated above.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

49. [ss] Re: Rebuttal to Karn--FORM vs. CONTENT

From: David Kelly <dkelly@hiwaay.net>
Date: Sat, 14 Oct 2000 15:08:14 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115030-2000.10.14-15.17.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lawrence Gruber writes:
> Hey, Tony, don't be ridiculous. Besides, there is NOTHING in
> the way of MACROS in MS WORD. MS WORD is completely devoid of any
> macro 'language'. There is, however, something called Visual Basic.
>
> I converted Mr. Walker's attachment to RTF (Rich Text File) format
> but it grew into a size of over SIX MEGABYTES!! (and who
> want's to download attachments of this size with a 56K modem!)

So how did Karn do in 10433 bytes for text, Image1.gif is 6690, Image2.gif
is 32675, Image3.gif is 25294, Image4.gif is 231k?

Karn used Microsoft Word 97. And apparently knows something about how
to use it.

I wouldn't have gone to the effort to run Word 97 or a docviewer to
open the enclosure just as I wouldn't bother do the same to read a
submitted resume in Word, or to read a resume typed in upper case.

In the test of Effective Communication Skills, Karn is winning.

--
David Kelly N4HHE, dkelly@hiwaay.net
==========
The human mind ordinarily operates at only ten percent of its
capacity -- the rest is overhead for the operating system.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

50. [ss] Re: Rebuttal Letter

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sun, 15 Oct 2000 10:31:11 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115047-2000.10.14-18.41.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sat, Oct 14, 2000 at 11:20:44AM -0400, PEGASUSDAT@aol.com wrote:
> I have witnessed several exhibitions of VMSK's performance in large hotel
> auditoria. It does not require 300 or so dB of S/N, which would imply a vast
> amount of power. The VMSK circuits were operating from 9-volt batteries. I
> saw the spectrum on an analyzer, which was as claimed. The received signal
> dipped to about -100 dBm before the signal was lost. Since that is only 20
> dB above the noise floor, the claims by the man from Qualcom that it cannot
> operate at low noise levels do not hold up.

So, Mr Walker, can you provide the following so the skeptical amateurs
on this mailing list can evaluate VMSK for ourselves?

1. Modulator and demodulator circuits, or block diagrams of at least.
   The demodulator must be included, so that we can modulate a signal,
   filter it as you have done and see the data demodulated
   correctly;

and/or

2. Some Matlab or MathCAD files modelling the procedure?

You see, we've seen your filter response, and Dr Sawyer said he
saw the signal spectrum, but we have not seen the data
demodulated. You can put in any filter you like if you don't
actually show that it demodulates correctly!

thanks,

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

51. [ss] Re: Rebuttal Letter

From: Robert McGwier <rwmcgwier@home.com>
Date: Sat, 14 Oct 2000 21:13:19 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115060-2000.10.14-20.32.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

HRW:

Anecdotes are not scientific evidence. Otherwise, everyone would
believe in UFO's, little green men, abductions, cold fusion, and
violations of the second law of thermodynamics (perpetual
motion machines and your communications system). I want
repeatable tests that I can run myself and a clear exposition
of the technical details of your system by an unbiased competent
communications scientist.

Bob

At 11:20 AM 10/14/2000 Saturday, PEGASUSDAT@aol.com wrote:
>The following mail has been received-
>HRW
>
>   BALDWIN SAWYER, D.Sc.
>   P O Box 96
>   Gates Mills, Ohio
>   44040
>Oct. 14, 2000
>
>Dan Strassberg, Tech. Editor
>EDN
>
>
>Dear Mr. Strassberg,
>
>Recently, I read your article about VMSK in EDN with some amusement, because
>you followed a frequent first reaction; which is to question its apparent
>escape from "Shannon's limit". But now - later - it seems that I am
>perceiving too many people being led like trusting sheep toward a "snake oil'
>bandwagon.
>
>While my D.Sc. is in Physics of Materials, from Carnegie Tech, I am not
>unfamiliar with the science of communication and information theory. After
>my D.Sc. I spent a considerable number of years at Bell Labs, where I studied
>with Bill Shockley and met Claude Shannon.
>
>Particularly disturbing is the pretentiously "scientific" Qualcom website
>article about VMSK. Obviously, Qualcom has a lot to lose if VMSK is
>successful. Its political attacks start with derogatory epithets followed
>directly with adverse "conclusions", followed next by attempts to
>substantiate them. The procedure of building from prejudice instead of from
>the available evidence pains me as a scientist.
>
>I have witnessed several exhibitions of VMSK's performance in large hotel
>auditoria. It does not require 300 or so dB of S/N, which would imply a vast
>amount of power. The VMSK circuits were operating from 9-volt batteries. I
>saw the spectrum on an analyzer, which was as claimed. The received signal
>dipped to about -100 dBm before the signal was lost. Since that is only 20
>dB above the noise floor, the claims by the man from Qualcom that it cannot
>operate at low noise levels do not hold up.
>
>While I have not been over his entire math, I do retain the impression that
>his examples are 'straw men', easily demolished, but not pertaining directly
>to the true VMSK. There are many who, incredulous at first, have witnessed
>its reduction to practice and discovered that it does indeed work. The
>conclusions of the man who has not risked seeing its performance do not agree
>with the observations and measurements we have seen.
>
>Baldwin Sawyer, D.Sc.

>
>
>
>---
>You are currently subscribed to ss as: rwmcgwier@home.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

52. [ss] Sinx/x

From: PEGASUSDAT@aol.com
Date: Sun, 15 Oct 2000 11:31:06 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-115151-2000.10.15-10.40.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil,

This E-Mail is being repeated. The original was too large for many mail
boxes due to the scanned image.

The attached shows the sinx/x pulses.

This may not be what you think is there, but this is what anyone who can read
a scope sees.

HRW
[Attachment: Sinx2VMSK.pdf; application/pdf; 217,383 bytes]

53. [ss] Re: Sinx/x

From: Robert McGwier <rwmcgwier@home.com>
Date: Sun, 15 Oct 2000 13:17:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-115167-2000.10.15-12.37.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

HRW:

I am having trouble understanding the sin(x)/x paper.
Addition is a linear operation, so I don't understand how
you add sinc pulses and get sinc^2(x). Furthermore, since
the very first day I took a math class where exponents were
taught, I learned one thing. Even powers of numbers always
yield non-negative numbers.   Please explain to us, if you can,
how you get zero crossings and negative going waveforms
(bottom drawings) from sinc^2(x)?

Bob

At 11:31 AM 10/15/2000 Sunday, PEGASUSDAT@aol.com wrote:
>Phil,
>
>This E-Mail is being repeated. The original was too large for many mail
>boxes due to the scanned image.
>
>The attached shows the sinx/x pulses.
>
>This may not be what you think is there, but this is what anyone who can read
>a scope sees.
>
>HRW

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

54. [ss] Re: Sinx/x

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Mon, 16 Oct 2000 07:52:04 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115189-2000.10.15-16.02.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sun, Oct 15, 2000 at 11:31:06AM -0400, PEGASUSDAT@aol.com wrote:
> This E-Mail is being repeated. The original was too large for many mail
> boxes due to the scanned image.
>
> The attached shows the sinx/x pulses.
>
> This may not be what you think is there, but this is what anyone who can read
> a scope sees.

An additional question for you (noting that my previous two have
not been addressed):

Why +/- 1/16 of Tb? Why not 3/16, for example? Or 1/32?

Thanks,

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

55. [ss] Re: Sinx/x

From: Brett Glass <brett@lariat.org>
Date: Sun, 15 Oct 2000 16:59:22 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115204-2000.10.15-18.08.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 11:17 AM 10/15/2000, Robert McGwier wrote:

>Even powers of numbers always
>yield non-negative numbers.   Please explain to us, if you can,
>how you get zero crossings and negative going waveforms
>(bottom drawings) from sinc^2(x)?

Simple: the "facts" and figures he's presenting are imaginary.

Sorry. Couldn't resist. ;-)

--Brett Glass

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

56. [ss] Re: Sinx/x

From: "Kelly Jordan" <kjordan@marathon.lakeheadu.ca>
Date: Sun, 15 Oct 2000 20:54:32 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115212-2000.10.15-20.03.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mr. PEGASUSDAT,

Please quit sending your large attachments to the list. The sending of large
attachments is not appreciated by myself and a lot of the others on this list.

In the future, post a link to a web site or ftp site were those that wish to see
your attachments can see them.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

57. [ss] Response to Walker's rebuttal

From: Phil Karn <karn@ka9q.net>
Date: Sun, 15 Oct 2000 23:09:06 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-115250-2000.10.16-01.19.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have posted an initial response to Walker's rebuttal on my website.
The URL is

http://people.qualcomm.com/karn/papers/vmsk/response.html

There are links both to and from the original paper.

Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

58. [ss] RE: ss digest: October 15, 2000

From: "Darryl Smith" <darryl@radio-active.net.au>
Date: Mon, 16 Oct 2000 18:48:58 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115261-2000.10.16-02.54.40--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mr. PEGASUSDAT,

Can you please provide use with a time domain equation for the VMSK/2 system
please, as requested a few days ago. Without this I am unable to continue
looking unbiased into this modulation scheme.

Darryl

Darryl Smith, VK2TDS POBox 169 Ingleburn NSW 2565 Australia
Mobile Number 0412 929 634 [+61 4 12 929 634 International]
Darryl@radio-active.net.au | www.radio-active.net.au for domain names

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

59. [ss] Re: Sinx/x

From: tlang@freeway.apana.org.au (Tony Langdon)
Date: 16 Oct 00 18:53:53 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115262-2000.10.16-04.12.56--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello Robert!

15 Oct 00 13:17, you wrote to TAPR Spread Spectrum Special Interest Group:

 RM> taught, I learned one thing. Even powers of numbers always
 RM> yield non-negative numbers. Please explain to us, if you can,
 RM> how you get zero crossings and negative going waveforms
 RM> (bottom drawings) from sinc^2(x)?

I had a look at the diagrams, and was somewhat mystified at the negative
squared function. Are there some complex components, or it it totally in
error?

Tony, VK3JED

.. "Energize" said Kirk. A little pink bunny appeared beating a drum!
--
|Fidonet: Tony Langdon 3:633/284.18
|Internet: tlang@freeway.apana.org.au

|
| Standard disclaimer: The views of this user are strictly his own.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

60. [ss] Re: Rebuttal to Karn

From: Thomas Sailer <sailer@ife.ee.ethz.ch>
Date: Mon, 16 Oct 2000 14:10:56 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115272-2000.10.16-07.20.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Paul McInnish wrote:

> The MAJORITY use Microsoft Word so the comment "many of us can't read
> it...." is incorrect... should have said "SOME of us can't read it...."

That doesn't make it "more right" to waste several hundred k of
everyones bandwidth just to transmit what would have been 2k
in plain ASCII.

Tom

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

61. [ss] Re: Sinx/x

From: Robert McGwier <rwmcgwier@home.com>
Date: Mon, 16 Oct 2000 08:43:09 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115276-2000.10.16-07.52.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Tony:

As Phil has so carefully pointed out to us, this is BPSK modulation.
Mr. Walker, in his "rebuttal" has admitted as much (see Karn's
analysis and his reply to Walker's rebuttal on Karn's web page). The
filters supplied to us by Mr. Walker are real, causal filters, and as such
do not have complex response. Since this is BPSK, it is a real signal.
Whereas the filter is real, the convolution of the BPSK signal and the
filter has a real result. Having said all of that, it has nothing to do
with the document Mr. Walker supplied. He has replied directly to
me and I do not feel at liberty to re-post his response but I will give
you a comment. His email to me states that I mistook sinc(x) for
sinc^2(x) and that the diagrams at the bottom of the .pdf he transmitted
are sinc(x). I pointed out to Mr. Walker that this is not what the document
says.   I also reminded him that he did not respond to my question of how
you take a signal, such as sinc(x) pulses and do linear operations (addition)
and get sinc^2(x). On this, he was completely silent.

Bob

At 04:53 AM 10/16/2000 Monday, you wrote:

>Hello Robert!
>
>15 Oct 00 13:17, you wrote to TAPR Spread Spectrum Special Interest Group:
>
> RM> taught, I learned one thing. Even powers of numbers always
> RM> yield non-negative numbers.   Please explain to us, if you can,
> RM> how you get zero crossings and negative going waveforms
> RM> (bottom drawings) from sinc^2(x)?
>
>I had a look at the diagrams, and was somewhat mystified at the negative
>squared function. Are there some complex components, or it it totally in
>error?
>
>Tony, VK3JED
>

>.. "Energize" said Kirk. A little pink bunny appeared beating a drum!
>--
>|Fidonet: Tony Langdon 3:633/284.18
>|Internet: tlang@freeway.apana.org.au
>|
>| Standard disclaimer: The views of this user are strictly his own.
>
>
>
>---
>You are currently subscribed to ss as: rwmcgwier@home.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

62. [ss] Re: Rebuttal to Karn

From: Robert McGwier <rwmcgwier@home.com>
Date: Mon, 16 Oct 2000 08:46:10 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115277-2000.10.16-07.55.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I completely agree. Since Alphacom has so much at stake in
this, I would hope that they would host Mr. Walker's missives.
Then we could get a couple of hundred bytes, dominated
by email headers with hypertext links in them, pointing to his
continued attempted refutation of Phil's analysis.

Bob

At 08:10 AM 10/16/2000 Monday, you wrote:
>Paul McInnish wrote:
>
> > The MAJORITY use Microsoft Word so the comment "many of us can't read
> > it...." is incorrect... should have said "SOME of us can't read it...."
>
>That doesn't make it "more right" to waste several hundred k of
>everyones bandwidth just to transmit what would have been 2k
>in plain ASCII.
>
>Tom
>
>---
>You are currently subscribed to ss as: rwmcgwier@home.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

63. [ss] VMSK and VMSK/2, some intuitive words

From: Robert McGwier <rwmcgwier@home.com>
Date: Mon, 16 Oct 2000 09:53:25 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115278-2000.10.16-09.04.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

While Phil is providing mathematics and engineering, let
the mathematician provide some intuitive words that should
be somewhat easier to follow where you want and need to go
even if they are much less rigorous.

In ftp://members.aol.com/pegasusdat/Wirelecom.pdf

Mr. Walker states clearly that in VMSK, the information is
carried in the placement of the zero crossings. I want to go
no further than this statement to appeal to your intuition
and have you reason with me as to why this scheme is so bad.

In real world systems "the channel" is the "sum" of all those
things that have an effect on a signal. This is noise added
by random processes in the channel, filters in the transmitter,
filters in the receiver, strange responses by the transmission

media that are not completely predictable, etc.

In order to tell whether a one or a zero has been transmitted
by VMSK, we have to measure the placement of a zero crossing
relative to some reference clock signal. In a random data stream
we must derive the correct phase of this reference clock signal
from the received data itself and this presents a problem in and
of itself but for now, let us suppose the hand of the universe
is telling us the timing.

When a real channel works on this signal, the things I mentioned
earlier: noise, filters, and media induced dispersion do the damage
to our signal. But the place where the damage is greatest is
near zero crossings.   We have to center our attention, in making
a detection near that place in this transmission scheme where we
are guaranteed these things:

(1) the energy available to make a decision is minimized!
(2) the dispersion by the media will have the greatest possible
       effect (go check out the phrase "timing jitter")

(1)   the optimal linear receiver for this signal would be what is
         called a matched filter. I get to carry around a copy of a
         one or a zero, corrected for timing phase, carrier frequency,
         carrier phase, etc.   Furthermore, to be really optimal, I have
         to correct these possible waveforms for the effects of the
         channel.   Supposing I do this, I get to compare the
         waveform for a 1 with the signal received and I get to compare
         the waveform for a 0 with the signal received.   Your intuition
         should tell you here that the "greater the difference" in the
         waveforms, the easier it is to distinguish between them as to what's
         received.   Mr. Walker's scheme has done its utmost to make sure
         that these waveforms are nearly identical and that only the tiniest
         of differences seperates a 1 from a 0 , and furthermore, the
         difference is "concentrated" if you will, in the place where the
         instantaneous amplitude of the signal is smallest, near the zero
         crossing. This is the place where the "instantaneous ratio" between
         the power in the signal relative to a randomly selected value for
         corrupting noise will be MINIMIZED. Not a good thing at all.

(2)   Let's think about the dispersive effects of a real channel on timing.
         Go find just about any kind of oscilloscope displaying a BPSK eye
         pattern. Especially one that is well equalized. You will see that
         the zero crossings are dispersed. The better the equalization, the
         less dispersed they are. Furthermore, the dispersion decreases with
         increased received and transmitted bandwidth. It's the old
fourier phenomenon.
         The narrower the phenomenon is in time, the wider the signal is in
frequency
         and vice versa. But when you widen the filter so that the timing is
         sharper, which should be obvious to you as required for VMSK,
         the more noise power passes through as well.   In order for me to get
         timing changes down to 1/16 of a baud time to be easily
observable, my filter
         needs to be pretty responsive out to many times the baud
rate. This is
         like letting the ocean roar in your ear while trying to hear a mouse's
         flatulence.   If we try to cut down this filter's response to
reject noise,
         then we increase the spread of the very zero crossings we are
trying to
         use to tell the difference between a zero and a one.   You cannot
         narrow the filter without increasing the dispersion of the places
where
         zero crossings occur. In a book or magazine or web page with eye
         patterns on it, you will see wide open eye diagrams, where it is easy
         to tell a one from a zero in a detected 0/1 waveform but the zero
crossings
         a smeared well over 1/8 of the baud. This is our old friend
fourier working
         with us again. If I narrow my frequency response then things spread
         out in time. You just cannot have it any other way.

This is possibly the worst modulation scheme I can recall for binary data
in which
I was supposed to design a coherent optimal linear detector.

I realize that none of this is a rigorous argument against VMSK. I do not
pretend

it is. I just wanted you to think for yourself about the intuitive
difficulties
in making such a scheme workable. There is no free lunch in physics and its
application to engineering when the mathematics used to describe physical
systems such as this have repeatedly been beaten about for decades. The
results match the theory so perfectly that no one but Mr. Walker is out trying
evade the results Shannon's theory predicts.

Bob

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

64. [ss] VMSK Plot

From: PEGASUSDAT@aol.com
Date: Mon, 16 Oct 2000 11:38:28 EDT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-115286-2000.10.16-10.48.13--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Addressees,

Karn's comments have taken the form of slanderous insulting remarks, which
are not only insulting to me, but to the two IEEE Fellows and the 5 Univ.
Profs.
(PhDs) that are also working on VMSK first hand. Two of them will be here at
this lab on friday to review C/N measurements after installation of the new
filters and review data for the FCC filing, along with the Baby Bell
installer. The latter will not install if the measurements do not meet FCC
reg 22.917.

He may believe as he choses. The hardware still goes out and the tests for
the FCC and the Baby Bells go on as planned. The MMDS hardware is in the
preproduction stage and purchase orders will go out as soon FCC certification
is received.

I do not wish to go into Karns qualifications to comment, but the
qualifications of the others to hold their own views should be obvious.

Naturally, I will not give him the E-Mail addresses of the people with whom
we are dealing. Does Qualcomm give me their personal contact list? The names
of the persons from whom they are seeking licenses.?- Their customer list? -
Their confidential information?

Most of them are aware of Karn's Web Site and are very angry because he is
attacking their credibilty as well. They have no wish to receive poison pen
letters from him.

The attached plot is from the FCC certification application in preparation.
Lets see if Karn's plots can match the hardware.

HRW
[Attachment: Doc2.doc; application/octet-stream; 35,328 bytes]

65. [ss] Re: VMSK Plot

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Tue, 17 Oct 2000 08:24:33 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115311-2000.10.16-16.34.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Mon, Oct 16, 2000 at 11:38:28AM -0400, PEGASUSDAT@aol.com wrote:
> Karn's comments have taken the form of slanderous insulting remarks, which
> are not only insulting to me, but to the two IEEE Fellows and the 5 Univ.
> Profs.

[...]

> I do not wish to go into Karns qualifications to comment, but the
> qualifications of the others to hold their own views should be obvious.

I'm intrigued by this last comment. Do you mean that none of us
are qualified to analyse your modulation method? That might be

considered a slanderous insulting remark in itself!

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

66. [ss] Re: Sinx/x

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Tue, 17 Oct 2000 08:08:27 +1000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115315-2000.10.16-17.19.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> As Phil has so carefully pointed out to us, this is BPSK modulation.
> Mr. Walker, in his "rebuttal" has admitted as much (see Karn's
> analysis and his reply to Walker's rebuttal on Karn's web page). The
> filters supplied to us by Mr. Walker are real, causal
> filters, and as such

Nothing like redefining everything to suit your argument at the time. :-)
I've had a look at both of Phil's analyses, from all of my recollections of
modulation theory, I have no reason to question Phil's work, it agrees with
what I remember of the theory (even if that is a little fuzzy at times! :)
).

As got Mr Walker's work, it lacks substance and consistency, IMHO.

> do not have complex response. Since this is BPSK, it is a
> real signal.
> Whereas the filter is real, the convolution of the BPSK signal and the
> filter has a real result. Having said all of that, it has
> nothing to do

Which I agree with.

> with the document Mr. Walker supplied. He has replied directly to
> me and I do not feel at liberty to re-post his response but I
> will give
> you a comment. His email to me states that I mistook sinc(x) for
> sinc^2(x) and that the diagrams at the bottom of the .pdf he
> transmitted
> are sinc(x). I pointed out to Mr. Walker that this is not
> what the document

Well, two points there. One, it clearly states "sinc^2(x), and two, it
shows the triangular pattern, which is negative going, as well as the
sinc(x) function.

> says.   I also reminded him that he did not respond to my
> question of how
> you take a signal, such as sinc(x) pulses and do linear
> operations (addition)
> and get sinc^2(x). On this, he was completely silent.

I didn't even get that far, think the BS filter got a bit overloaded. ;-)
But your point is valid, squaring can't happen with a linear addition.
Well, not when I went to uni, and couldn't even fudge it in the lab after a
few beers! :-)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

67. [ss] Re: VMSK Plot

From: Martin Farrell <Martin@hobbit.nu>
Date: Mon, 16 Oct 2000 23:22:52 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115317-2000.10.16-17.37.11--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hamish Moffatt <hamish@cloud.net.au> writes

>I'm intrigued by this last comment. Do you mean that none of us
>are qualified to analyse your modulation method? That might be

>considered a slanderous insulting remark in itself!
Hamish,

The only benefit from all this is that we are getting some
interesting lessons in communications from Karn et al.

The down side is that VMSK and its promotion is so obviously
flawed that this argument can only degenerate into a slanging
match between those who are defending the indefensible and those
who are affronted by a confidence trick.

Keep it up ;-)
--
Martin G0PFT

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

68. [ss] Re: VMSK Plot

From: Phil Karn <karn@ka9q.net>
Date: Mon, 16 Oct 2000 17:27:16 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
        frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
        pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
        dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-115333-2000.10.16-19.37.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Karn's comments have taken the form of slanderous insulting remarks, which

As any lawyer can explain, slander must be both a) spoken and b)
false. Neither is the case for my web pages or email.

>are not only insulting to me, but to the two IEEE Fellows and the 5
>Univ. Profs. (PhDs) that are also working on VMSK first hand. Two of
>them will be here at

I find it hard to understand how I can insult people I don't know, who
you refuse to identify, and quite frankly, may not even exist. I have
criticized you by name only because your name appears on all of the
VMSK papers, articles and patents I've seen. And it's not my fault
that these writings all portray you as incompetent and self-deluded.

You and your friends really have no cause to get mad at me. I'm just
the messenger. I've done nothing but apply the firmly established
theory in any basic communications textbook. Take it up with Fourier,
Nyquist and Shannon.

Even those guys merely discovered mathematical principles that have
always existed, so you can't really get mad at them either. (Besides,
Fourier and Nyquist are dead, and I heard Shannon has Alzheimers' -- a
truly tragic thing to happen to one of the greatest mathematical minds
of the 20th century). If, unlike me, you're a religious person, get
mad at God. He made the rules.

>The attached plot is from the FCC certification application in preparation.

As I've already explained several times, the mere fact that you meet a
FCC emission mask says nothing about the bandwidth you need to
actually *receive* your signal. The role of FCC certification is to
ensure that your transmitters do not unduly interfere with users on
adjacent channels. The FCC doesn't care if those adjacent channel
users interfere with *your* receivers. That's your problem.

Looking at the plot, I have several comments:

1. The span is too narrow. The Nyquist bandwidth for binary modulation
at 270 kb/s with a single sideband is +/-135 KHz, which is off the
sides of the plot. Nevertheless, the VMSK spectrum is likely flat in
that region based on my earlier analysis.

2. There is no unambiguous indication of the resolution bandwidth.
(The black boxes below "1 kHz manual" and "100 Hz manual" are not
legible here.) But as I have already explained, you can make your
clock spike stand as high as you like above the noise &
modulation-bearing grass by simply lowering the resolution
bandwidth. This proves nothing except that you waste a lot of power on

a useless clock component.

It appears from your comments at the bottom that you still don't
understand my analysis. It doesn't matter *how* low the "grass"
appears relative to the clock on a spectrum analyzer. As long as the
spectral density of the grass sufficiently exceeds the receiver's
noise spectral density (*not* the analyzer's noise spectral density,
which is probably much higher), it can still be demodulated.

I'm puzzled by your last sentence, the one beginning "He has detector
output plots showing no useful information can be obtained from the
grass". Who is "he", and which plots are you referring to?

Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

69. [ss] Re: VMSK Plot

From: "David Schick" <ds@purdue.edu>
Date: Mon, 16 Oct 2000 22:29:56 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115343-2000.10.16-21.37.25--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil, Bob, and the list:

As a second year student in Electrical Engineering at Purdue University, I
have been following this discussion very closely. The information and
material that has
been presented is an excellent intutative introduction to communications
theory.
I just wanted to say that your efforts in providing arguments and proofs
has not fallen on seemingly deaf ears of the intended audience.
You have certainly advanced my education on the subject and intrigued me
enough to research it further.

Mr. Karn, as always, has provided some very interesting and usually
entertaining sources and
footnotes on the subject and has certainly provided me with much productive
web surfing. It isn't often when you get to hear some of the greatest minds
in an abstract mathmatically oriented field speak informally in a accessible
manner
on their subject.

Cheers,

Dave Schick, W9OFA

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

70. [ss] RE: Response to Walker's rebuttal

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Tue, 17 Oct 2000 15:40:00 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115468-2000.10.17-14.49.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Mr. Karn: Nice job. I appreciate your patience in tackling this
problem in a way that's educational as well as effective. I assume you
don't really expect to convince existing VMSK devotees of their errors, but
your work here should have some influence, at least in peer reviewed journals
and perhaps beyond.

This matter isn't worth too much more of your time, but I do have several
suggestions if you're revising further:

 - Expand on this issue of low absolute group delay. You've pointed out the

connection to filter bandwidth. But beyond that, if VMSK really were sensitive to absolute group delay (1), how would it fare when presented with any realistic propagation medium?
- Reductio ad absurdum. If 90bps/hz can be achieved using the VMSK 7-8-9 "code", why not go to VMSK 63-64-65 or 255-256-257? I believe the papers assert that the bandwidth efficiency would increase linearly. Other than "practical considerations", what is the tradeoff here? Just need a faster logic family in the detector :-)?
- Your analysis does get overly personal and derogatory towards Mr. Walker in places. I for one think a bit more passive presentation would make the analysis more compelling, particularly to those unfamiliar with your work and bona fides.

Again, thanks. And congratulations!

(1) Maybe this is why VMSK is so difficult to analyze using accepted techniques. Any attempt to simulate, record, or observe the signal using anything other than the scope on the experimenter's bench introduces absolute delay and destroys the modulation!

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

71. [ss] DSSS synchronisation

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 18 Oct 2000 23:01:06 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115546-2000.10.18-07.10.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am currently thinking about how to synchronise the PN generator
in the receiver and transmitter in a DSSS system.

In N4ICK's article in December 1986 QST, he uses a 7-bit PN word length
ie 127 bit sequence. (Correct me if I'm wrong.) For receiver
synchronisation, the local PN generator is run at double clock
rate until the local PN word matches the received PN word.

The comparison is 7-bit, but the entire PN sequence is 127-bit.
Isn't it possible (likely even) that a particular 7-bit sequence
would appear more than once in the 127-bit sequence? Or does
the PN sequence (particularly an m-sequence) have low/zero
autocorrelation by design?

Another alternative is a matched filter, which in this case
is 127 flip flops.. not something you want to build out of
74 or 4xxx logic by hand, but quite possible in an FPGA.
If the approach taken in the article is sound though it
will use a lot less gates.

thanks,

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

72. [ss] Re: DSSS synchronisation

From: Jake Janovetz <janovetz@uiuc.edu>
Date: Wed, 18 Oct 2000 09:51:15 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115567-2000.10.18-10.01.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Oct 18, 2000 at 11:01:06PM +1100, Hamish Moffatt wrote:
>
> I am currently thinking about how to synchronise the PN generator
> in the receiver and transmitter in a DSSS system.
>
> In N4ICK's article in December 1986 QST, he uses a 7-bit PN word length
> ie 127 bit sequence. (Correct me if I'm wrong.) For receiver
> synchronisation, the local PN generator is run at double clock

> rate until the local PN word matches the received PN word.
>
> The comparison is 7-bit, but the entire PN sequence is 127-bit.
> Isn't it possible (likely even) that a particular 7-bit sequence
> would appear more than once in the 127-bit sequence? Or does
> the PN sequence (particularly an m-sequence) have low/zero
> autocorrelation by design?

There are 128 7-bit sequences, all of which (excepting the 0 sequence)
appear exactly once in such a PN sequence. Put another way,
the sequence generator only has a 7-bit memory. Therefore, once
you've matched those 7 bits, you will be generating the exact same
sequence as the transmitter.

> Another alternative is a matched filter, which in this case
> is 127 flip flops.. not something you want to build out of
> 74 or 4xxx logic by hand, but quite possible in an FPGA.
> If the approach taken in the article is sound though it
> will use a lot less gates.

--
   janovetz@uiuc.edu | How can it be that mathematics, being after all a
 University of Illinois | product of human thought independent of experience,
                        | is so admirably adapted to the objects of reality?
        PP-ASEL | - Albert Einstein

Disclaimer: The policies of this University certainly do not reflect my
            own opinions, objectives, or agenda.

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73. [ss] Re: DSSS synchronisation

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Thu, 19 Oct 2000 08:27:40 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115598-2000.10.18-16.37.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Wed, Oct 18, 2000 at 09:51:15AM -0500, Jake Janovetz wrote:
> There are 128 7-bit sequences, all of which (excepting the 0 sequence)
> appear exactly once in such a PN sequence. Put another way,
> the sequence generator only has a 7-bit memory. Therefore, once
> you've matched those 7 bits, you will be generating the exact same
> sequence as the transmitter.

Thanks for this explanation. All clear now.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

74. [ss] Re: DSSS synchronisation <LYR5362-115567-2000.10.18-10.01.07--JAUSTEN#TNTECH.EDU@lists.tapr.org>

From: Jeffrey Austen <jausten@tntech.edu>
Date: Thu, 19 Oct 2000 09:48:41 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-115680-2000.10.19-09.58.00--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>> I am currently thinking about how to synchronise the PN generator
>> in the receiver and transmitter in a DSSS system.
>>
>> In N4ICK's article in December 1986 QST, he uses a 7-bit PN word length
>> ie 127 bit sequence. (Correct me if I'm wrong.) For receiver
>> synchronisation, the local PN generator is run at double clock
>> rate until the local PN word matches the received PN word.
>>
>> The comparison is 7-bit, but the entire PN sequence is 127-bit.
>> Isn't it possible (likely even) that a particular 7-bit sequence

>> would appear more than once in the 127-bit sequence? Or does
>> the PN sequence (particularly an m-sequence) have low/zero
>> autocorrelation by design?
>
>There are 128 7-bit sequences, all of which (excepting the 0 sequence)
>appear exactly once in such a PN sequence. Put another way,
>the sequence generator only has a 7-bit memory. Therefore, once
>you've matched those 7 bits, you will be generating the exact same
>sequence as the transmitter.
>
>
>> Another alternative is a matched filter, which in this case
>> is 127 flip flops.. not something you want to build out of
>> 74 or 4xxx logic by hand, but quite possible in an FPGA.
>> If the approach taken in the article is sound though it
>> will use a lot less gates.

The problem with this method is that reliably detecting an individual chip in the spread-spectrum signal is not possible. The only exception to this is when the signal is excessively strong, which is not normally the case. As an example, consider a system where the spreading ratio is only 10 (a 10 dB spreading gain). In this example there are ten chips for every data bit. For a bit error ratio of 10^-6 the required Eb/No is 10.5 dB; the corresponding chip-energy to noise-spectral-density ratio is Ec/No = 0.5 dB which corresponds to a chip probability of error of approximately 0.08. The probability of correctly detecting a sequence of seven bits is (1-0.08)^7 which is approximately 1/2 so the probability of missing it (a false negative) is also approximately 1/2. The probability of a false positive is larger than 1/3. In most SS systems the spreading ratio is larger than used in this example which would make the results even worse.

Methods for synchronization are (a) avoiding it by using a matched filter and (b) searching for correlation peaks.

If the spreading sequence is not too long the matched filter can be a practical solution. The filter needs to be analog or quantized with several bits per chip; using one bit per chip will reduce the performance (I don't know how much) but can probably be made to work. The problem with the matched filter is that timing errors accumulate quickly and degrade the performance; the sequence must be reasonably short and the chip rate clock must be very accurate. When the spreading sequence is short and parts count is not a major concern (e.g., on an IC), such as is the case for the ISM band DSSS chip sets, this may be the preferred solution.

Searching for correlation peaks is done by building multiple correlators. For example, using a delay line three correlators can be used, one 1/2 chip ahead, one on-time, and one 1/2 chip behind. The on-time output is used for data demodulation and the ahead and behind outputs are used to detect timing errors once synchronized. To obtain initial synchronization the sequence generator at the receiver is made to drift in relation to the transmitter sequence, for example by occasionally skipping a chip (swallowing a pulse), and monitoring the correlator outputs for a peak.

A good book for details on SS synchronization issues is "Introduction to Spread Spectrum Systems" by Peterson, Ziemer and Borth. In particular, it has one chapter on code tracking and another on obtaining initial synchronization. The book is fairly mathematical ("senior-graduate level") but the block diagrams and explanations are worth browsing through even if one ignores the math.

Jeff, k9ja

Jeffrey Austen | Tennessee Technological University
jausten@tntech.edu | Box 5004
+1-931-372-3485 | Cookeville Tennessee 38505   U.S.A.

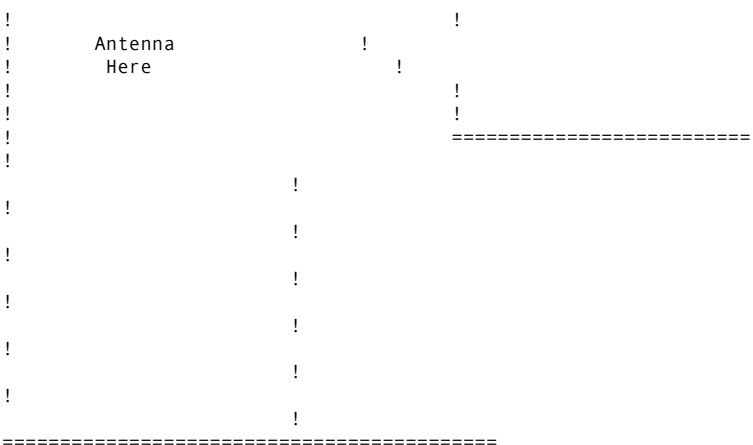
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

75. [ss] New Intel/Proxim USB Wireless Netork

From: tv@juno.com
Date: Fri, 20 Oct 2000 21:09:15 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ssampson@radio-link.net, contact@NO.SPAMgbppr.org,

multiplx@NOSPAMgbonline.com
Message-ID: <LYR6751-115881-2000.10.20-23.16.55--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Has anybody seen the new Intel "Anypoint" network radios. I just picked
up two at the local Office Depot for $99. They are made by Proxim. The
plug into the USB port (or PCMCIA for laptops). The USB radio is
shapped like this:



The L shaped printer circuit bourde is 2.75 long by 3 inches tall. The
antenna is an X shaped trace on the upper part the PC board. You could
easily mount the whole thing at the feedpoint of a dish or as part of
some kind of director/reflector array. No feedline losses.

With an USB extender, you could easily mount it on a tower or mast.

No Linux support from Intel (of course) but seems like if you could
figure out the USB protocols or reverse engineer a the proxim driver this
might make a dandy radio for ethernet bridges with a Unix router.

It was a bit of pain to install do to ugly windows problems, but once I
got it going it works quite well. Covers the yard out to about 300 feet
through brick walls.

Only 100 milliwatts, (I assume) but with no feedline losses, the 7 dB
difference (from 500 mW) might not be that significant.

Anybody else seen these things ? What do you think ?

Could the X-shaped PC board antenna be the driven element of a helical ,
quagi, or x-beam antenna ?

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76. [ss] Re: New Intel/Proxim USB Wireless Netork

From: John Hansen <john@hansen.net>
Date: Sun, 22 Oct 2000 17:37:45 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116078-2000.10.22-16.49.49--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 09:09 PM 10/20/00 -0700, you wrote:
>Has anybody seen the new Intel "Anypoint" network radios. I just picked
>up two at the local Office Depot for $99.

Two for $99 each or two for $99 total?

Thanks,

John W2FS

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

77. [ss] Re: New Intel/Proxim USB Wireless Netork

From: tv@juno.com
Date: Sun, 22 Oct 2000 16:50:15 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org
Message-ID: <LYR6751-116096-2000.10.22-18.57.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

$99 for each, sorry for the confusing statement.

Tim

On Sun, 22 Oct 2000 17:37:45 -0400 John Hansen <john@hansen.net> writes:
> At 09:09 PM 10/20/00 -0700, you wrote:
> >Has anybody seen the new Intel "Anypoint" network radios. I just
> picked
> >up two at the local Office Depot for $99.
>
> Two for $99 each or two for $99 total?
>
> Thanks,
>
> John W2FS
>
>
> ---
> You are currently subscribed to ss as: TV@JUNO.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

78. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
Date: Sun, 22 Oct 2000 20:10:27 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116101-2000.10.22-19.20.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> Has anybody seen the new Intel "Anypoint" network radios. I just picked
> up two at the local Office Depot for $99. They are made by Proxim. The
> plug into the USB port (or PCMCIA for laptops).   The USB radio is
> shapped like this:
>

I would say that if you're going to spend your money and time atleast get
something thats IEEE 802.11b complient!   The Intel product only works
with other intel devices, however ALL 802.11b devices
can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices sell for
$99 and up.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

79. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Sun, 22 Oct 2000 17:16:12 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116102-2000.10.22-19.27.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I agree if your goal is networking around the house, etc. However, the
original post was about remoting the unit to a gain antenn, like a dish or
???, and for this a USB or other "remotable" means is helpful. My 802.11b
card is PCMCIA and not remotable.

Enjoy!

Lyle

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Chris W4YYZ
> Sent: Sunday, October 22, 2000 5:10 PM
> To: TAPR Spread Spectrum Special Interest Group

> Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>
> > Has anybody seen the new Intel "Anypoint" network radios. I just picked
> > up two at the local Office Depot for $99. They are made by Proxim. The
> > plug into the USB port (or PCMCIA for laptops).   The USB radio is
> > shapped like this:
> >
>
> I would say that if you're going to spend your money and time atleast get
> something thats IEEE 802.11b complient!   The Intel product only works
> with other intel devices, however ALL 802.11b devices
> can "talk" to eachother. 802.11b is also 11Mbps.   802.11b
> devices sell for
> $99 and up.
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

80. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 23 Oct 2000 09:34:26 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116176-2000.10.23-09.57.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I disagree... even though the standard 802.11 says that all 802.11 products can talk to each other... is a major myth! We have had them in our labs and can ONLY get a specific manufacturer to talk to his own product! Competitors will not communicate with each other! We have tried, believe me!

Also, the data rates fall off at an god awful fast rate when any noise, interference or jamming is incurred! Range is very poor at best and if you get on the fringe, your data rates die! A small amount of noise, interference or jamming and the data rates die even faster! 802.11 products just do not have the immunity that one needs. Of course, one gets what one pays for!

We prepared a white paper as to why we choose not to buy into the 802.11 standard and if anyone is interested, let me know - with a direct e-mail address - and I'll send it to you in Adobe Acrobat format.

Regards & 73,

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
5375 Oakbrook Parkway
Norcross, GA 30093, USA
Direct Pho: 678.684.2011
Main Pho: 678.684.2000
Fax: 678.684.2001
Cellular Phone: 678.429.2124

E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com

----- Original Message -----
From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Sunday, October 22, 2000 8:10 PM
Subject: [ss] Re: New Intel/Proxim USB Wireless Netork

:
:
:
:
:
: > Has anybody seen the new Intel "Anypoint" network radios. I just picked
: > up two at the local Office Depot for $99. They are made by Proxim. The
: > plug into the USB port (or PCMCIA for laptops).   The USB radio is
: > shapped like this:
: >

:
: I would say that if you're going to spend your money and time atleast get
: something thats IEEE 802.11b complient!   The Intel product only works
: with other intel devices, however ALL 802.11b devices
: can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices sell
for
: $99 and up.
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

81. [ss] Re: New Intel/Proxim USB Wireless Netork

From: Doug Bade <dbade@clecom.com>
Date: Mon, 23 Oct 2000 11:23:50 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116178-2000.10.23-10.30.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I am currently using Webgear Avaitor Pro and Breezecom interchangeably at
3000 ft mobile laptop to Access Point (Breezecom).. some do work
interchangeably.

I agree that all rates may not be supported (Like 3mb in Breezecom to max
2mb in WebGear.. Doug KB8GVQ

At 09:34 AM 10/23/00 -0400, you wrote:
>I disagree... even though the standard 802.11 says that all 802.11 products
>can talk to each other... is a major myth! We have had them in our labs and
>can ONLY get a specific manufacturer to talk to his own product!
>Competitors will not communicate with each other! We have tried, believe
>me!

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

82. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
Date: Mon, 23 Oct 2000 13:08:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116188-2000.10.23-12.18.05--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I disagree... even though the standard 802.11 says that all 802.11
products
> can talk to each other... is a major myth! We have had them in our labs
and
> can ONLY get a specific manufacturer to talk to his own product!
> Competitors will not communicate with each other! We have tried, believe
> me!

OK, but I'm talking about the improved 802.11b (note: b) standard. I've
used
4 diff. cards and they've all worked well on the same network.

You are currently subscribed to ss as: lyris.ss@tapr.org
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83. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Mon, 23 Oct 2000 10:16:47 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116189-2000.10.23-12.27.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Chris!

Which cards have you tested/used?

I'm using an Apple Airport for my Wireless Access Point and ORiNOCO (Lucent) PCMCIA "silver" cards for my Windows laptop computers. These work fine, but the Apple base station happens to use the same Lucent PCMCIA card internally as its radio link, and Lucent makes the $99 cards for Apple for the iBooks.

Thanks!

Lyle

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Chris W4YYZ
> Sent: Monday, October 23, 2000 10:09 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>
> OK, but I'm talking about the improved 802.11b (note: b) standard. I've
> used
> 4 diff. cards and they've all worked well on the same network.
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

84. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Rob Wittner" <rmw@rwa-inc.com>
Date: Mon, 23 Oct 2000 14:53:10 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116208-2000.10.23-14.03.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I also have the Apple Airport (the cheapest 802.11b Ethernet-enabled Access Point that I know of!) and am currently using three of 3Com's AirConnect PCMCIA cards (3CRWE737A) and one of Cisco's AiroNet 340 Series PCMCIA cards. The Airport is on the ground floor of the house, actually at two to three feet below ground level. I can get 11Mbps speed throughout all of the downstairs and half the upstairs, 5Mbps for most of the rest of the upstairs, 2Mbps for the far bedroom, and patchy coverage in the far bathroom. The Airport had a default SSID that was related to it's MAC address - I changed mine to something easier to remember and set all the card settings on my machine(s) to match it and haven't had a single problem.

The Apple Airport software includes a tool that shows a nifty scrolling graph of signal strength vs. noise for each client. I walked around the house with my laptop and noted the time I spent in each room, e.g. 30 seconds ago I was in the living room, one minute ago I was in the kitchen, etc. I finished my "sweep" downstairs and was able to look at the graph to determine what kind of coverage I was getting. This was before I acquired the Cisco card - it comes with a similar utility for the client - much easier.

Cisco also has drivers for CE devices - the 340 card works well in my Jornada 690. 3Com has recently shipped drivers for CE devices, but you have to sign up to have them mail you a CD and then wait the three to four weeks to get it. (Wouldn't it have been easier to just put the darn drivers and utilities on an FTP server somewhere?!)

I haven't tried the other brands personally, but I know at work the network folks have had Compaq's WL100, 3Com's card, and Cisco's cards and APs working together.

   -Rob
    KZ5RW

-----Original Message-----
From: Lyle Johnson
Sent: Monday, October 23, 2000 1:17 PM

Hi Chris!

Which cards have you tested/used?

I'm using an Apple Airport for my Wireless Access Point and ORiNOCO (Lucent)
PCMCIA "silver" cards for my Windows laptop computers. These work fine, but
the Apple base station happens to use the same Lucent PCMCIA card internally
as its radio link, and Lucent makes the $99 cards for Apple for the iBooks.

Thanks!

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

85. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Peter D. Bayne" <pbayne@mhtc.net>
Date: Mon, 23 Oct 2000 13:58:49 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116211-2000.10.23-14.09.52--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>I disagree... even though the standard 802.11 says that all 802.11 products
>can talk to each other... is a major myth! We have had them in our labs and
>can ONLY get a specific manufacturer to talk to his own product!
>Competitors will not communicate with each other! We have tried, believe
>me!
>
>Also, the data rates fall off at an god awful fast rate when any noise,
>interference or jamming is incurred! Range is very poor at best and if you
>get on the fringe, your data rates die! A small amount of noise,
>interference or jamming and the data rates die even faster! 802.11 products
>just do not have the immunity that one needs. Of course, one gets what one
>pays for!
>
>We prepared a white paper as to why we choose not to buy into the 802.11
>standard and if anyone is interested, let me know - with a direct e-mail
>address - and I'll send it to you in Adobe Acrobat format.
>
>Regards & 73,
>
>Paul McInnish - K4BET
>Manager, Business Development
>Digital Wireless Corp.
>5375 Oakbrook Parkway
>Norcross, GA 30093, USA
>Direct Pho: 678.684.2011
>Main Pho: 678.684.2000
>Fax: 678.684.2001
>Cellular Phone: 678.429.2124
>
>E-mail: k4bet@digital-wireless.com
>http://www.digital-wireless.com
>
>----- Original Message -----
>From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Sent: Sunday, October 22, 2000 8:10 PM
>Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>
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>:
>:
>:
>:
>:
>: > Has anybody seen the new Intel "Anypoint" network radios. I just picked
>: > up two at the local Office Depot for $99. They are made by Proxim. The
>: > plug into the USB port (or PCMCIA for laptops).   The USB radio is
>: > shapped like this:
>: >
>:
>: I would say that if you're going to spend your money and time atleast get
>: something thats IEEE 802.11b complient!   The Intel product only works
>: with other intel devices, however ALL 802.11b devices

>: can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices sell
>for
>: $99 and up.
>:
>:
>: ---
>: You are currently subscribed to ss as: k4bet@digital-wireless.com
>: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>:
>
>
>---
>You are currently subscribed to ss as: pbayne@mhtc.net
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
I would appreciate a copy of the reference that I you refer to.

Thanks for the favor.

73,

Pete de WK9K

ARS WK9K
605 Maiden Street
Mineral Point, WI 53565

e-mail: WK9K@arrl.net
fax: 503-210-6618

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

86. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Mon, 23 Oct 2000 15:53:39 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116221-2000.10.23-16.18.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

White paper is attached...

73 & best regards,

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
5375 Oakbrook Parkway
Norcross, GA 30093, USA
Direct Pho: 678.684.2011
Main Pho: 678.684.2000
Fax: 678.684.2001
Cellular Phone: 678.429.2124

E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com

----- Original Message -----
From: "Peter D. Bayne" <pbayne@mhtc.net>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Monday, October 23, 2000 2:58 PM
Subject: [ss] Re: New Intel/Proxim USB Wireless Netork

: >I disagree... even though the standard 802.11 says that all 802.11
products
: >can talk to each other... is a major myth! We have had them in our labs
and
: >can ONLY get a specific manufacturer to talk to his own product!
: >Competitors will not communicate with each other! We have tried, believe
: >me!
: >
: >Also, the data rates fall off at an god awful fast rate when any noise,
: >interference or jamming is incurred! Range is very poor at best and if
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: >get on the fringe, your data rates die! A small amount of noise,

: >interference or jamming and the data rates die even faster! 802.11
products
: >just do not have the immunity that one needs. Of course, one gets what
one
: >pays for!
: >
: >We prepared a white paper as to why we choose not to buy into the 802.11
: >standard and if anyone is interested, let me know - with a direct e-mail
: >address - and I'll send it to you in Adobe Acrobat format.
: >
: >Regards & 73,
: >
: >Paul McInnish - K4BET
: >Manager, Business Development
: >Digital Wireless Corp.
: >5375 Oakbrook Parkway
: >Norcross, GA 30093, USA
: >Direct Pho: 678.684.2011
: >Main Pho: 678.684.2000
: >Fax: 678.684.2001
: >Cellular Phone: 678.429.2124
: >
: >E-mail: k4bet@digital-wireless.com
: >http://www.digital-wireless.com
: >
: >----- Original Message -----
: >From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
: >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
: >Sent: Sunday, October 22, 2000 8:10 PM
: >Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
: >
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: >:
: >:
: >:
: >:
: >: > Has anybody seen the new Intel "Anypoint" network radios. I just
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: >: > up two at the local Office Depot for $99. They are made by Proxim.
The
: >: > plug into the USB port (or PCMCIA for laptops).   The USB radio is
: >: > shapped like this:
: >: >
: >:
: >: I would say that if you're going to spend your money and time atleast
get
: >: something thats IEEE 802.11b complient!   The Intel product only works
: >: with other intel devices, however ALL 802.11b devices
: >: can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices
sell
: >for
: >: $99 and up.
: >:
: >:
: >: ---
: >: You are currently subscribed to ss as: k4bet@digital-wireless.com
: >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >:
: >
: >
: >---
: >You are currently subscribed to ss as: pbayne@mhtc.net
: >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
: >
: I would appreciate a copy of the reference that I you refer to.
:
: Thanks for the favor.
:
:
: 73,
:
: Pete de WK9K
:
: ARS WK9K
: 605 Maiden Street
: Mineral Point, WI 53565
:
: e-mail: WK9K@arrl.net

: fax: 503-210-6618
:
:
: ---
: You are currently subscribed to ss as: k4bet@digital-wireless.com
: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
:
[Attachment: 80211 White Paper.PDF; application/pdf; 83,846 bytes]
[Attachment: 802-11 Pro Con.PDF; application/pdf; 25,452 bytes]

87. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Mon, 23 Oct 2000 14:41:55 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116227-2000.10.23-16.54.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

Do you know which chipsets these cards are based on? The units I have arer
all based on Lucent's stuff. It would be interesting to know if any of the
others you mention are based on Harris/Intersil or ???

Thanks,

Lyle

PS - ORiNOCO now has an access point price competitive with Apple's and you
don't need a Mac, or the free Java stuff Bdale pointed me to, to set it up.
LJ

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Rob Wittner
> Sent: Monday, October 23, 2000 11:53 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>
>
>
> I also have the Apple Airport (the cheapest 802.11b
> Ethernet-enabled Access
> Point that I know of!) and am currently using three of 3Com's AirConnect
> PCMCIA cards (3CRWE737A) and one of Cisco's AiroNet 340 Series
> PCMCIA cards...
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

88. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Mon, 23 Oct 2000 15:08:19 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116230-2000.10.23-17.19.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello again,

I found the info
(http://www.zdnet.com/pcmag/stories/reviews/0,6755,2472697,00.html).
Aironet, 3com and COmpaq use the Harris/Intersil chipset; Apple and
ORiNOCO/Lucent use the Lucent chipset.

So, they are interoperable! :-)

Lyle

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Lyle Johnson
> Sent: Monday, October 23, 2000 2:42 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>

> Hi!
>
> Do you know which chipsets these cards are based on? The units I
> have arer
> all based on Lucent's stuff. It would be interesting to know if
> any of the
> others you mention are based on Harris/Intersil or ???
>
> Thanks,
>
> Lyle
>
> PS - ORiNOCO now has an access point price competitive with
> Apple's and you
> don't need a Mac, or the free Java stuff Bdale pointed me to, to
> set it up.
> LJ
>
> > -----Original Message-----
> > From: bounce-ss-14410@lists.tapr.org
> > [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Rob Wittner
> > Sent: Monday, October 23, 2000 11:53 AM
> > To: TAPR Spread Spectrum Special Interest Group
> > Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
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> >
> >
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> > PCMCIA cards (3CRWE737A) and one of Cisco's AiroNet 340 Series
> > PCMCIA cards...
> >
>
>
>
>
> ---
> You are currently subscribed to ss as: wa7gxd@email.msn.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

89. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Peter D. Bayne" <pbayne@mhtc.net>
Date: Mon, 23 Oct 2000 20:56:27 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116268-2000.10.23-21.07.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>White paper is attached...
>
>73 & best regards,
>
>Paul McInnish - K4BET
>Manager, Business Development
>Digital Wireless Corp.
>5375 Oakbrook Parkway
>Norcross, GA 30093, USA
>Direct Pho: 678.684.2011
>Main Pho: 678.684.2000
>Fax: 678.684.2001
>Cellular Phone: 678.429.2124
>
>E-mail: k4bet@digital-wireless.com
>http://www.digital-wireless.com
>
>----- Original Message -----
>From: "Peter D. Bayne" <pbayne@mhtc.net>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Sent: Monday, October 23, 2000 2:58 PM
>Subject: [ss] Re: New Intel/Proxim USB Wireless Netork

>
>
>: >I disagree... even though the standard 802.11 says that all 802.11
>products
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>: >Competitors will not communicate with each other! We have tried, believe
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>: >We prepared a white paper as to why we choose not to buy into the 802.11
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>: >E-mail: k4bet@digital-wireless.com
>: >http://www.digital-wireless.com
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>: >----- Original Message -----
>: >From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
>: >To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>: >Sent: Sunday, October 22, 2000 8:10 PM
>: >Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>: >
>: >
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>: >:
>: >: > Has anybody seen the new Intel "Anypoint" network radios. I just
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>The
>: >: > plug into the USB port (or PCMCIA for laptops).   The USB radio is
>: >: > shapped like this:
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>: >:
>: >: I would say that if you're going to spend your money and time atleast
>get
>: >: something thats IEEE 802.11b complient!   The Intel product only works
>: >: with other intel devices, however ALL 802.11b devices
>: >: can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices
>sell
>: >for
>: >: $99 and up.
>: >:
>: >:
>: >: ---
>: >: You are currently subscribed to ss as: k4bet@digital-wireless.com
>: >: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
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>: >
>: >
>: >---
>: >You are currently subscribed to ss as: pbayne@mhtc.net
>: >To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>: >

>: I would appreciate a copy of the reference that I you refer to.
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>: Thanks for the favor.
>:
>:
>: 73,
>:
>: Pete de WK9K
>:
>: ARS WK9K
>: 605 Maiden Street
>: Mineral Point, WI 53565
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>: e-mail: WK9K@arrl.net
>: fax: 503-210-6618
>:
>:
>: ---
>: You are currently subscribed to ss as: k4bet@digital-wireless.com
>: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>:
>
Thanks I appreciate the trouble. I will read the two with great interest.

73,

Pete de WK9K

Peter D. Bayne
ARS WK9K
605 Maiden Street
Mineral Point, WI 53565
USA

Grid: EN42vu
AMSAT Member No.: 32904

e-mail: WK9K@AMSAT.org
Voice: (608) 987-4324
Fax: (503) 210-6618
Packet: WK9K@WD9ESU.wi.us.na

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

90. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "Marius Hauki" <Marius.Hauki@datarespons.no>
Date: Tue, 24 Oct 2000 09:33:53 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116304-2000.10.24-02.43.51--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The recent Cisco products are based on Prism if I recall
correctly. I also think Intersil has an OEM version with
coax connector on PCMCIA format.

Marius Hauki

Lyle Johnson wrote:
>
> Hi!
>
> Do you know which chipsets these cards are based on? The units I have arer
> all based on Lucent's stuff. It would be interesting to know if any of the
> others you mention are based on Harris/Intersil or ???
>
> Thanks,
>
> Lyle
>
> PS - ORiNOCO now has an access point price competitive with Apple's and you
> don't need a Mac, or the free Java stuff Bdale pointed me to, to set it up.
> LJ

> > -----Original Message-----
> > From: bounce-ss-14410@lists.tapr.org
> > [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Rob Wittner
> > Sent: Monday, October 23, 2000 11:53 AM
> > To: TAPR Spread Spectrum Special Interest Group
> > Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
> >
> >
> >
> > I also have the Apple Airport (the cheapest 802.11b
> > Ethernet-enabled Access
> > Point that I know of!) and am currently using three of 3Com's AirConnect
> > PCMCIA cards (3CRWE737A) and one of Cisco's AiroNet 340 Series
> > PCMCIA cards...
> >
>
> ---
> You are currently subscribed to ss as: MARIUS@DATARESPONS.NO
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

91. [ss] Re: Rebuttal to Karn

From: Gerry Creager N5JXS <gerry@cs.tamu.edu>
Date: Tue, 24 Oct 2000 07:40:48 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116319-2000.10.24-07.50.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Thomas Sailer wrote:
>
> Paul McInnish wrote:
>
> > The MAJORITY use Microsoft Word so the comment "many of us can't read
> > it...." is incorrect... should have said "SOME of us can't read it...."
>
> That doesn't make it "more right" to waste several hundred k of
> everyones bandwidth just to transmit what would have been 2k
> in plain ASCII.

Further, one should look at and understand his audience. I use Linux.
I use StarOffice. Given a choice of proprietary formats, I'd prefer to
receive these attachments in StarOffice format... which is closer to 2k
than 2M for the same docs. I really am sorry, but I don't even have
MSWord installed on my laptop with Win9x...
--
Gerry Creager -- gerry@cs.tamu.edu
Network Engineering |Research focusing on
Academy for Advanced Telecommunications |Satellite Geodesy and
and Learning Technologies |Geodetic Control
Texas A&M University   979.458.4020 (Phone) -- 979.847.8578 (Fax)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

92. [ss] Re: I don't like the way you guys advertise so much on Taper.

From: "Paul McInnish" <pmcinnish@digiwrls.com>
Date: Tue, 24 Oct 2000 08:01:27 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>,
        <mkting@digital-wireless.com>
Message-ID: <LYR6751-116322-2000.10.24-08.29.50--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Ed Doubek, you, my friend, are out of line!

I have only responded to those comments made by various folks about spread
spectrum, etc. and being in the business... I would think that the knowledge
gained would be of interest to the group. Actually, when a topic or subject
was brought up that I had no knowledge of... I would go to our engineering
staff and get some help. Now if you and the rest of the group do not want
to take advantage of the cumulative knowledge of an individual and a company
that has the expertise and was a pioneer in SS technology, then that is your
loss!

Did you send a comment to those that discussed the Proxim, Intel, Freewave, etc., etc. wares? So, effective immediately, this is my last response to any comment, question, etc. Matter of fact, I'll probably unsubscribe because I DO NOT MIX MY HOBBY AND VOCATION! It is not worth ANY grief by some mis-guided "reflector/internet policeman"! How many hams do you think I have helped that monitor this reflector that do not have ANY thing to do with SS technology in their daily life but just have the interest? All of this assistance was done 'off-line' and most of it from my home at night and on the week-ends. Done at the sacrifice of personal time and some research required!

Halk? What is the definition of that word? Did you mean hawk? I HAVE NEVER offered (hawked) to sell ANYTHING on this reflector! If I got an inquiry from someone that 'monitors' the reflector... I responded OFF LINE! So, yes, my hobby has been quite beneficial to me in developing business, developing relationships, etc. BUT not as Ed Doubek has implied! Especially when I have seen blatant kudos for competitive products... but I did learn something each time it was done... I did NOT bitch or complain and try to "get someone in trouble" by sending similar e-mails as did Ed Doubek!

Judging by the "TAPR Position Statement on Spread Spectrum Technology Development" as outlined and defined on the web site... then I have contributed - in a small way - AND my employer - in a big way - to the further development of the technology. Even to the point of making product available - free - to locals that are experimenting with range, control and various type of sites...

So, why did I respond for all to see? Because... Ed, you sent your snide comment to my company marketing e-mail link on one of our web sites and this caused quite a few people to see it here in our firm... so now they get to see my response along with those several thousand members of the reflector, world wide!

Also... in the subject field... Taper? Ed, did you mean TAPR?

Best 73 to all!

Paul McInnish - K4BET
Manager, Business Development
Digital Wireless Corp.
5375 Oakbrook Parkway
Norcross, GA 30093, USA
Direct Pho: 678.684.2011
Main Pho: 678.684.2000
Fax: 678.684.2001
Cellular Phone: 678.429.2124

E-mail: k4bet@digital-wireless.com
http://www.digital-wireless.com

----- Original Message -----
From: "ED DOUBEK" <Docom@worldnet.att.net>
To: <mkting@digital-wireless.com>; <n9rf@arrl.net>
Sent: Tuesday, October 24, 2000 7:40 AM
Subject: I don't like the way you guys advertise so much on Taper.

: I don't like the way Paul Mcinnish keeps using Taper to halk your wares.
: Let's tone it down a bit!
:
: Ed Doubek / N9RF

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

93. [ss] Re: Rebuttal to Karn

From: "Rob Wittner" <rmw@rwa-inc.com>
Date: Tue, 24 Oct 2000 10:14:48 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116324-2000.10.24-09.24.14--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hmmm... a 2K file?

First, probably the best delivery mechanism would have been to send a URL to a page containing the document text and bitmaps. If one was picky about how the document looked, perhaps a URL to a PDF file.

Second, although a much better job could have been done on Mr. PEGASUSDAT's
part to provide better (smaller, lower bit-depth) bitmaps in his document,
the fact remains that the initial "Rebuttal to Karn" document contained four
bitmaps, none of which appeared to be compressed in any way. It's anyone's
guess what format they were originally in. The original Word file size was
233K. I removed the bitmaps from the document and re-saved it without any
further editing. The resulting file was 34.5K, not exactly the pinnacle of
storage efficiency, but hardly 2 megabytes.

Granted, the images should have been flattened to monochrome or 4-level
grayscale before being placed in the document, but given that they weren't,
I think Word did a reasonable job of storing them. I am very curious as to
how StarOffice would be able to get this file down to 2K! :-)

   -Rob
    KZ5RW

-----Original Message-----
From: Gerry Creager N5JXS
Sent: Tuesday, October 24, 2000 8:41 AM

Further, one should look at and understand his audience. I use Linux.
I use StarOffice. Given a choice of proprietary formats, I'd prefer to
receive these attachments in StarOffice format... which is closer to 2k
than 2M for the same docs. I really am sorry, but I don't even have
MSWord installed on my laptop with Win9x...

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

94. [ss] Re: Rebuttal to Karn

From: Gerry Creager <gerry@cs.tamu.edu>
Date: Tue, 24 Oct 2000 12:46:27 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116347-2000.10.24-12.58.38--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Rob Wittner wrote:
>
> Hmmm... a 2K file?
>
> First, probably the best delivery mechanism would have been to send a URL to
> a page containing the document text and bitmaps. If one was picky about how
> the document looked, perhaps a URL to a PDF file.
>
> Second, although a much better job could have been done on Mr. PEGASUSDAT's
> part to provide better (smaller, lower bit-depth) bitmaps in his document,
> the fact remains that the initial "Rebuttal to Karn" document contained four
> bitmaps, none of which appeared to be compressed in any way. It's anyone's
> guess what format they were originally in. The original Word file size was
> 233K. I removed the bitmaps from the document and re-saved it without any
> further editing. The resulting file was 34.5K, not exactly the pinnacle of
> storage efficiency, but hardly 2 megabytes.
>
> Granted, the images should have been flattened to monochrome or 4-level
> grayscale before being placed in the document, but given that they weren't,
> I think Word did a reasonable job of storing them. I am very curious as to
> how StarOffice would be able to get this file down to 2K! :-)

I plead guilty to following on another post... a 2k file may well, as
you indicate, not be achievable.

However, a link to a URL, similar to Phil's efforts, would be welcome.

StarOffice treats the text in an XML-ish manner. Embedded graphics are
handled inline, or as references.

I'm afraid the majority of my comment really should have been responding
to the inference that since most of the world uses M$ Office, I should
too.

Regards, and apologies for misstatement,
Gerry
--

```
Gerry Creager                          |      Never ascribe to Malice that
AATLT                                  |      which can adequately be
Texas A&M University                   |      explained by Stupidity.
979.458.4020  (Phone)                  |      -- Lazarus Long
979.847.8578  (Fax)

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

95. [ss] test

From: Bill Reed <transit_man@yahoo.com>
Date: Tue, 24 Oct 2000 10:50:49 -0700 (PDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116349-2000.10.24-13.00.12--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
test, ignore


_____________________________________________
Do You Yahoo!?
Yahoo! Messenger - Talk while you surf!  It's FREE.
http://im.yahoo.com/

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

96. [ss] Re: Rebuttal to Karn

From: "Rob Wittner" <rmw@rwa-inc.com>
Date: Tue, 24 Oct 2000 14:14:46 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116357-2000.10.24-13.35.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
Gerry,

I hope you didn't read any disrespect in what I was saying - I read the
majority of your posts on this and other SIGs with great interest.  I was
just trying to keep the argument fair.  I do, after all is said and done,
agree with you - there are plenty of platform-neutral methods of
distributing documents out there.  You shouldn't be forced to use software
that you do not want to use just to view a document.  'nuff said, I think.
(This doesn't have much to do with SS and treads dangerously close to
religious flamewar territory!  No flames, please! :-)

   -Rob


-----Original Message-----
From: Gerry Creager
Sent: Tuesday, October 24, 2000 1:46 PM

I plead guilty to following on another post...  a 2k file may well, as
you indicate, not be achievable.

<SNIP>

I'm afraid the majority of my comment really should have been responding
to the inference that since most of the world uses M$ Office, I should
too.

Regards, and apologies for misstatement,
Gerry



---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
```

97. [ss] Re: New Intel/Proxim USB Wireless Netork

From: Brett Glass <brett@lariat.org>
Date: Tue, 24 Oct 2000 17:32:53 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116376-2000.10.24-18.42.30--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Paul:

After reviewing the papers you've posted, I am not sure how much
credibility I can give them by themselves. Your company's Web site makes
it clear that it has a vested interest in an alternative technology and
therefore in discouraging the use of 802.11b within its target market niche.
Your literature also attempts to discourage the use of 900 MHz products,
even though they have some notable advantages in some situations (in
particular, a smaller H20 cross-section and a greater ability to penetrate
walls, concrete, and various obstacles).

While some of the assertions made in your white papers MAY be valid, it
would be imprudent for anyone to accept them without independent confirmation
from an unbiased third party. It is also worth noting that your company's
technology has (unless I'm misreading the information on the Web site)
1/20th the maximum throughput of 802.11b and is also proprietary and
single-sourced. This, to many users, would provide a strong incentive
to solve any problems that might crop up with 802.11b rather than using
your products. If your literature were less one-sided, and/or cited
reliable independent sources, it might not set off so many "alarm bells"
in the critical reader.

Just my 2 cents.

--Brett Glass

At 07:34 AM 10/23/2000, Paul McInnish wrote:

>I disagree... even though the standard 802.11 says that all 802.11 products
>can talk to each other... is a major myth! We have had them in our labs and
>can ONLY get a specific manufacturer to talk to his own product!
>Competitors will not communicate with each other! We have tried, believe
>me!
>
>Also, the data rates fall off at an god awful fast rate when any noise,
>interference or jamming is incurred! Range is very poor at best and if you
>get on the fringe, your data rates die! A small amount of noise,
>interference or jamming and the data rates die even faster! 802.11 products
>just do not have the immunity that one needs. Of course, one gets what one
>pays for!
>
>We prepared a white paper as to why we choose not to buy into the 802.11
>standard and if anyone is interested, let me know - with a direct e-mail
>address - and I'll send it to you in Adobe Acrobat format.
>
>Regards & 73,
>
>Paul McInnish - K4BET
>Manager, Business Development
>Digital Wireless Corp.
>5375 Oakbrook Parkway
>Norcross, GA 30093, USA
>Direct Pho: 678.684.2011
>Main Pho: 678.684.2000
>Fax: 678.684.2001
>Cellular Phone: 678.429.2124
>
>E-mail: k4bet@digital-wireless.com
>http://www.digital-wireless.com
>
>----- Original Message -----
>From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
>To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>Sent: Sunday, October 22, 2000 8:10 PM
>Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>
>
>:
>:
>:
>:
>:
>: > Has anybody seen the new Intel "Anypoint" network radios. I just picked
>: > up two at the local Office Depot for $99. They are made by Proxim. The
>: > plug into the USB port (or PCMCIA for laptops).   The USB radio is
>: > shapped like this:
>: >
>:
>: I would say that if you're going to spend your money and time atleast get

>: something thats IEEE 802.11b complient!   The Intel product only works
>: with other intel devices, however ALL 802.11b devices
>: can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices sell
>for
>: $99 and up.
>:
>:
>: ---
>: You are currently subscribed to ss as: k4bet@digital-wireless.com
>: To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>:
>
>
>---
>You are currently subscribed to ss as: BRETT@LARIAT.ORG
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

98. [ss] Re: New Intel/Proxim USB Wireless Netork

From: "jeff millar" <jeff@wa1hco.mv.com>
Date: Wed, 25 Oct 2000 01:10:43 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116410-2000.10.24-20.22.34--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've used the Harris/Intersil and Lucent chips interchangeably at work.
The cards and access points come from different vendors and have different
features exposed at the user interface but work well together. I don't
know of any other vendors of 801.11b chip sets.

Maybe the problems with interoperability occured with 802.11 (no "b")
which has two incompatible implementations, one frequency hopped and
one direct sequence?

jeff

----- Original Message -----
From: "Lyle Johnson" <wa7gxd@email.msn.com>
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Sent: Monday, October 23, 2000 5:41 PM
Subject: [ss] Re: New Intel/Proxim USB Wireless Netork

> Hi!
>
> Do you know which chipsets these cards are based on? The units I have
arer
> all based on Lucent's stuff. It would be interesting to know if any of
the
> others you mention are based on Harris/Intersil or ???
>
> Thanks,
>
> Lyle
>
> PS - ORiNOCO now has an access point price competitive with Apple's and
you
> don't need a Mac, or the free Java stuff Bdale pointed me to, to set it
up.
> LJ
>
> > -----Original Message-----
> > From: bounce-ss-14410@lists.tapr.org
> > [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Rob Wittner
> > Sent: Monday, October 23, 2000 11:53 AM
> > To: TAPR Spread Spectrum Special Interest Group
> > Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
> >
> >
> >
> > I also have the Apple Airport (the cheapest 802.11b
> > Ethernet-enabled Access
> > Point that I know of!) and am currently using three of 3Com's AirConnect
> > PCMCIA cards (3CRWE737A) and one of Cisco's AiroNet 340 Series
> > PCMCIA cards...

> >
>
>
>
>
> ---
> You are currently subscribed to ss as: JEFF@WA1HCO.MV.COM
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

99. [ss] Re: 802.11 interoperability

From: Tim Godfrey <tgodfrey@unicom.net>
Date: Wed, 25 Oct 2000 00:05:42 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116422-2000.10.24-23.15.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 00:00 10/24/00 -0500, Paul McInnish wrote:

>I disagree... even though the standard 802.11 says that all 802.11 products
>can talk to each other... is a major myth! We have had them in our labs and
>can ONLY get a specific manufacturer to talk to his own product!
>Competitors will not communicate with each other! We have tried, believe
>me!

I have personally used 802.11b network cards and access points from
Cisco/Aironet, Samsung, Lucent, Nokia, Cabletron, Intersil, Apple, Gemtek,
Nortel, No Wires Needed, and Toko (and probably others that I have
forgotten). I have never had any problem with interoperability. All these
vendors' products communicate with each other using the 802.11 standard
protocol. Of course, there are a number of options and parameters involved
in configuring an 802.11 network, like any other network. The default
settings can and do vary between vendors.

There is an independent trade organization called WECA (Wireless Ethernet
Compatibility Alliance) that certifies interoperability between 802.11b
devices. See <http://www.wirelessethernet.org/certified_products.asp>

There is also an interoperability lab in operation at the University of New
Hampshire, where vendors take their products to verify interoperability and
standards compliance. <http://www.iol.unh.edu/consortiums/wireless/main.html>

The 802.11 market is large and growing. The vendors are very serious about
standards compliance and interoperability. I don't want anyone to think I
have a hidden agenda, so I will mention that I am the secretary of the
802.11 standards committee.

_____(mobile)____
Tim Godfrey KC0FCP (tgodfrey@unicom.net)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

100. [ss] Re: New Intel/Proxim USB Wireless Netork

From: filip weytjens <filip.weytjens@smartmove-eu.com>
Date: Wed, 25 Oct 2000 12:21:32 +0200
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116450-2000.10.25-05.32.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I disagree ... I used pcmcia 802.11b devices based on two different chipsets
(Harris and Lucent) and for each card we used a different operating system
(windows/linux). There was no interoperability problem.

regards,
Filip Weytjens - ON4FK

Paul McInnish wrote:

> I disagree... even though the standard 802.11 says that all 802.11 products
> can talk to each other... is a major myth! We have had them in our labs and
> can ONLY get a specific manufacturer to talk to his own product!
> Competitors will not communicate with each other! We have tried, believe
> me!
>
> Also, the data rates fall off at an god awful fast rate when any noise,
> interference or jamming is incurred! Range is very poor at best and if you
> get on the fringe, your data rates die! A small amount of noise,
> interference or jamming and the data rates die even faster! 802.11 products
> just do not have the immunity that one needs. Of course, one gets what one
> pays for!
>
> We prepared a white paper as to why we choose not to buy into the 802.11
> standard and if anyone is interested, let me know - with a direct e-mail
> address - and I'll send it to you in Adobe Acrobat format.
>
> Regards & 73,
>
> Paul McInnish - K4BET
> Manager, Business Development
> Digital Wireless Corp.
> 5375 Oakbrook Parkway
> Norcross, GA 30093, USA
> Direct Pho: 678.684.2011
> Main Pho: 678.684.2000
> Fax: 678.684.2001
> Cellular Phone: 678.429.2124
>
> E-mail: k4bet@digital-wireless.com
> http://www.digital-wireless.com
>
> ----- Original Message -----
> From: "Chris W4YYZ" <w4yyz@tampabay.rr.com>
> To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
> Sent: Sunday, October 22, 2000 8:10 PM
> Subject: [ss] Re: New Intel/Proxim USB Wireless Netork
>
> :
> :
> :
> :
> :
> : > Has anybody seen the new Intel "Anypoint" network radios. I just picked
> : > up two at the local Office Depot for $99. They are made by Proxim. The
> : > plug into the USB port (or PCMCIA for laptops).   The USB radio is
> : > shapped like this:
> : >
> :
> : I would say that if you're going to spend your money and time atleast get
> : something thats IEEE 802.11b complient!   The Intel product only works
> : with other intel devices, however ALL 802.11b devices
> : can "talk" to eachother. 802.11b is also 11Mbps.   802.11b devices sell
> for
> : $99 and up.
> :
> :
> : ---
> : You are currently subscribed to ss as: k4bet@digital-wireless.com
> : To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
> :
>
> ---
> You are currently subscribed to ss as: filip.weytjens@smartmove.be
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

101. [ss] Re: ss digest: October 25, 2000

From: k2pat@webtv.net (Pat Howard)
Date: Thu, 26 Oct 2000 07:26:10 -0400 (EDT)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116576-2000.10.26-06.35.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As a casual reader, I get the impression that 802.11 had a compatibility
issue and that 802.11b has none. N'est ce pas?

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

102. [ss] Re: ss digest: October 25, 2000

From: Doug Bade <doug@clecom.com>
Date: Thu, 26 Oct 2000 08:42:34 -0400
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116582-2000.10.26-07.54.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have 802.11(not b) equipment from Breezecom working with
Webgear, There are examples of both .11 and .11b which inter-operate...
         The firmware of both units has been updated several times to bring
this together, but they DO work at 1MB at levels, above and down to,
approaching the noise floor for their receivers. I think the 802.11b
consortium is trying a lot harder to do it right the first time, having
learned from the 802.11 problems. The real nag I see is having 2
technologies using the same standard number.. one being FHSS and the other
being CDMA.... I should think to avoid confusion, they should have been
separated a long time ago.... The average consumer reading a spec label is
not likely going to get it right...
         I also have been reading specs on 11MB and assuming all other
things being equal, it looks to me that link budgets significantly get
worse at 11MB, more than at 1-2MB.. For HAM purposes, this seems
counterproductive as bandwidth is nice, but that measure-able penalty
seems a poor trade off for Outdoor needs... Least of all, someone correct
me if I am wrong, but at 11MB with a wider aperture in the receiver (
filters etc..) , does this not allow a higher susceptibility to
interference from narrowband, or narrower band equipment ? (again I am
speaking for outdoor Ham Links etc...) CDMA or FHSS not withstanding????
         I have been pursuing 802.11 for this real or perceived reason...
(I do not own any 802.11b equipment to compare), I have only specs to work
with and maybe opinions which may be in error.... Has anyone verified or
tested otherwise????
         Thanks for the bandwidth.. Doug Bade KB8GVQ

At 07:26 AM 10/26/00 -0400, you wrote:

>As a casual reader, I get the impression that 802.11 had a compatibility
>issue and that 802.11b has none. N'est ce pas?
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

103. [ss] If you want...

From: Francis See <francisc@asia.com>
Date: Sat, 28 Oct 2000 01:16:24 +0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-116726-2000.10.27-12.32.24--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hello all,

I've join this reflector several weeks ago and was suprised to see some
interest facts and scientific theories on SS.

The reflector has been very helpful to me both as a hobby and as a
professional.

Sad to say, that some exchanges I see are quite offensive, and I'm not
referring to the content, but the way it is presented.

These kind of exchanges discourages active participation to the reflector.

To those who were offended....please don't take any of nasty rebuttals
personally. I believe critics keep us sharp....which is a good thing. Some
may make comments that are not related to SS at all.....another sad thing.

If you want to say something bad....keep it to yourself.
If you want to say something good....you may send it to me personally.
If you want to say something about SS....send it to the reflector.

73, Francis DU3HF

Francis See
Auto ID Philippines, Inc.
41 Victoria Avenue, New Manila
Quezon City, M.M.
PHILIPPINES
Tel: 632-723-8347 to 48
Fax: 632-725-5006

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

November 2000

Original source file: ss.0011
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0011

1. [ss] Re: ss digest: October 27, 2000

From: "Lord Ferrox Tutinean" <ferrox@hotmail.com>
Date: Wed, 01 Nov 2000 22:54:20 GMT
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117518-2000.11.01-17.04.27--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>From: "TAPR Spread Spectrum Special Interest Group digest"
><ss@lists.tapr.org>
>Reply-To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
>To: "ss digest recipients" <ss@lists.tapr.org>
>Subject: ss digest: October 27, 2000
>Date: Sat, 28 Oct 2000 00:00:32 -0500
>
>TAPR Spread Spectrum Special Interest Group Digest for Friday, October 27,
>2000.
>
>1. If you want...
>' OKAY '
>--
>
>Subject: If you want...
>From: Francis See <francisc@asia.com>
>Date: Sat, 28 Oct 2000 01:16:24 +0800
>X-Message-Number: 1
>
>Hello all,
>
>I've join this reflector several weeks ago and was suprised to see some
>interest facts and scientific theories on SS.
>
>The reflector has been very helpful to me both as a hobby and as a
>professional.
>
>Sad to say, that some exchanges I see are quite offensive, and I'm not
>referring to the content, but the way it is presented.
>
>These kind of exchanges discourages active participation to the reflector.
>
>To those who were offended....please don't take any of nasty rebuttals
>personally. I believe critics keep us sharp....which is a good thing. Some
>may make comments that are not related to SS at all.....another sad thing.
>
>If you want to say something bad....keep it to yourself.
>If you want to say something good....you may send it to me personally.
>If you want to say something about SS....send it to the reflector.
>
>
>
>73, Francis DU3HF
>
>
>Francis See
>Auto ID Philippines, Inc.
>41 Victoria Avenue, New Manila
>Quezon City, M.M.
>PHILIPPINES
>Tel: 632-723-8347 to 48
>Fax: 632-725-5006
>
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>
>END OF DIGEST
>
>---
>You are currently subscribed to ss as: ferrox@hotmail.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com.

Share information about yourself, create your own public profile at
http://profiles.msn.com.

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] Re: Looking for FPGA design software

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Wed, 1 Nov 2000 15:39:07 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117534-2000.11.01-17.49.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

I noticed that Xilinx no longer has the $95 software package available.
Their least expensive suite is now $695, and that is a special. It only
runs for one year. A real pity, since they have some excellent parts around
$20.

Altera's Max+Plus II software package is free, but only works for 6 months,
then it is $2,000/annum. Sigh. Too bad, they have some good parts (6000
family) that are fairly cheap.

Atmel has free software for their AT40K and AT60K parts. That's the good
news. The bad news is that the parts are expensive - $40 to $80 each.

QuickLogic has free software that is excellent. But the parts are one-time
only. They do offer free parts for new designs. I am not sure howlong they
will offer this if we take too much advanatge of it :-)

For CPLDs the story is different. Free software from Altera and Xilinx and
some fairly dense parts.

Anyone found any free or nearly free software to support the Xilinx Spartan
2 family or Altera 6000 family?

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] Re: Looking for FPGA design software

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Thu, 2 Nov 2000 07:08:01 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117648-2000.11.02-06.19.10--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Altera package is renewable indefinitely, for free. The most significant
limitations are the lack of Verilog (must use their AHDL), and it only supports
low-end devices (6k, 1k, some CPLDs).

    -----Original Message-----
    From: bounce-ss-9486@lists.tapr.org

> [mailto:bounce-ss-9486@lists.tapr.org]On Behalf Of Lyle Johnson
> Sent: Wednesday, November 01, 2000 6:39 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: Looking for FPGA design software
>
> Hi!
>
> I noticed that Xilinx no longer has the $95 software package available.
> Their least expensive suite is now $695, and that is a special. It only
> runs for one year. A real pity, since they have some excellent parts around
> $20.
>
> Altera's Max+Plus II software package is free, but only works for 6 months,
> then it is $2,000/annum. Sigh. Too bad, they have some good parts (6000
> family) that are fairly cheap.
>
> Atmel has free software for their AT40K and AT60K parts. That's the good
> news. The bad news is that the parts are expensive - $40 to $80 each.
>
> QuickLogic has free software that is excellent. But the parts are one-time
> only. They do offer free parts for new designs. I am not sure howlong they
> will offer this if we take too much advanatge of it :-)
>
> For CPLDs the story is different. Free software from Altera and Xilinx and
> some fairly dense parts.
>
> Anyone found any free or nearly free software to support the Xilinx Spartan
> 2 family or Altera 6000 family?
>
> Lyle
>
>
>
> ---
> You are currently subscribed to ss as: khs@ieee.org
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: Looking for FPGA design software

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 3 Nov 2000 00:04:17 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117656-2000.11.02-07.14.31--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Nov 02, 2000 at 07:08:01AM -0500, Kenneth H. Sinclair wrote:
> The Altera package is renewable indefinitely, for free. The most significant
> limitations are the lack of Verilog (must use their AHDL), and it only supports
> low-end devices (6k, 1k, some CPLDs).

The language support is a serious limitation. I wouldn't consider
using anything other than VHDL. (We could start a VHDL versus Verilog
war here but I guess that wouldn't be very productive, although
probably quite amusing.)

What about simulation? Not too many choices. There's

* VHDL Simili -- from www.symphonyeda.com .. Free (as in beer,
  not as in speech), and quite good. Windows only.

* Icarus Verilog -- from www.icarus.com. Free as in speech (GPL),
  should work on most UNIX platforms, certainly on Linux. Maybe Windows.

Neither of these are graphical simulators with waveform viewers
etc as in Active-HDL or ModelSim. They both run test benches only.
IVL (Icarus Verilog) has some synthesis support for Xilinx as well.
I don't know how well developed it is though as I don't use/know Verilog.

Simili can generate a waveform dump I understand, for use in
a waveform viewer.

I'm fortunate to have access to Alliance 3.1, ModelSim and

several good synthesis tools at work (Leonardo, Synplify, FPGA Compiler
II). It's pretty hard for a hobbyist though.. those tools are
very expensive. A good simulator costs thousands of dollars.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] Re: Looking for FPGA design software

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 3 Nov 2000 00:21:08 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117661-2000.11.02-07.31.01--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Nov 03, 2000 at 12:04:17AM +1100, Hamish Moffatt wrote:
> What about simulation? Not too many choices. There's

I should add that I consider simulation to be pretty critical.
You can of course write the code, synthesis it and test it on
the bench, but observability is really low and a design
of any significant complexity is going to need observability
for debugging.

Xilinx have a few interesting app notes in the Virtex section
about PN sequence generation, DSSS matched filters and
a few other things related to SS/CDMA. The matched filter
app note points out that you can get up to 16x oversampling
for the price of 2x using the SRL16 macro, ie using the LUTs
as shift registers. Quite a smart design; should work
in a 4000E or later, if you can get the space.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Re: Looking for FPGA design software

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Thu, 2 Nov 2000 09:45:05 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117675-2000.11.02-08.56.35--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Nov 02, 2000 at 07:08:01AM -0500, Kenneth H. Sinclair wrote:
    > The Altera package is renewable indefinitely, for free. The most significant
    > limitations are the lack of Verilog (must use their AHDL), and it only supports
    > low-end devices (6k, 1k, some CPLDs).

    The language support is a serious limitation. I wouldn't consider
    using anything other than VHDL. (We could start a VHDL versus Verilog
    war here but I guess that wouldn't be very productive, although
    probably quite amusing.)

    What about simulation? Not too many choices. There's

I'm comfortable with proprietary HDL for small designs (< 10k lines), because
there's not too much time/knowledge tied up in it. I agree for substantive
work a standard retargetable language is important.

Altera has good integrated simulation and timing analysis.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Thu, 2 Nov 2000 08:11:08 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: <jwp@pegasustech.com>
Message-ID: <LYR6751-117686-2000.11.02-10.21.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi!

Jim Pearce sent me this pointer (Thanks, Jim!). Xilinx does indeed support
the Spartan II FPGA with their FREE software now.

http://www.xilinx.com/sxpresso/webpack.htm

73,

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] Grass

From: PEGASUSDAT@aol.com
Date: Thu, 2 Nov 2000 12:34:19 EST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
        frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
        pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
        dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-117700-2000.11.02-11.45.28--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil,

Enough of this nonsense about the modulation being in the grass.
See the attached.

HRW
[Attachment: 10101grass.doc; application/octet-stream; 169,472 bytes]

9. [ss] Re: Grass

From: Jeff King <jeff@aerodata.net>
Date: Thu, 02 Nov 2000 13:28:29 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: PEGASUSDAT@aol.com
Message-ID: <LYR6751-117704-2000.11.02-12.41.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Stop sending attachements to the SS-SIG list.

PEGASUSDAT@aol.com wrote:
>
> Phil,
>
> Enough of this nonsense about the modulation being in the grass.
> See the attached.
>
> HRW
>
>
>   --

>   Name: 10101grass.doc
>   10101grass.doc   Type: Microsoft Word Document (application/msword)
>   Encoding: base64

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Re: Grass

From: Mike Rafferty <mraff@zoomnet.net>
Date: Thu, 02 Nov 2000 15:17:06 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117722-2000.11.02-14.27.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I don't see anything. Why don't you mail it directly to Phil instead of
wasting bandwidth sending it to everybody?

PEGASUSDAT@aol.com wrote:

> Phil,
>
> Enough of this nonsense about the modulation being in the grass.
> See the attached.
>
> HRW
>
>
> --
>   Name: 10101grass.doc
> 10101grass.doc   Type: Microsoft Word Document (application/msword)
>   Encoding: base64

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: Looking for FPGA design software

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 3 Nov 2000 08:22:41 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117724-2000.11.02-15.33.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Nov 02, 2000 at 09:45:05AM -0500, Kenneth H. Sinclair wrote:
> Altera has good integrated simulation and timing analysis.

Hmm. Is that in the free tool? (Max Plus II Baseline?) I couldn't
see it when I tried out that software a year or so ago.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

12. [ss] Re: New WebPACK ISE V3.2i Released!

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 3 Nov 2000 08:31:35 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117725-2000.11.02-15.41.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Nov 02, 2000 at 08:11:08AM -0800, Lyle Johnson wrote:
> Jim Pearce sent me this pointer (Thanks, Jim!). Xilinx does indeed support
> the Spartan II FPGA with their FREE software now.
>
> http://www.xilinx.com/sxpresso/webpack.htm

Wow, that's pretty cool. I've just finished downloading it, haven't
installed it yet. It'd be better if some more of the prototype
board vendors had Spartan-II boards. One supplier wrote back
to me that they didn't intend to do a Spartan-II board because
the Xilinx Student Edition (2.1) didn't support that chip --
but now the software's free the situation is different.

thanks,

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org

To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

13. [ss] Re: Looking for FPGA design software

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Thu, 2 Nov 2000 16:34:17 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117726-2000.11.02-15.45.08--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Nov 02, 2000 at 09:45:05AM -0500, Kenneth H. Sinclair wrote:
> Altera has good integrated simulation and timing analysis.

Hmm. Is that in the free tool? (Max Plus II Baseline?) I couldn't
see it when I tried out that software a year or so ago.

Yes (they may have changed the licensed features since you tried). Currently
you get AHDL and schematic entry, compilation for 6k, 1k, and max devices,
functional and timing simulation, waveform editor, timing analyzer, programmer,
and generation (only) of VHDL and Verilog.

I'm using it right now for a flex 6024 design.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

14. [ss] Re: Grass

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 3 Nov 2000 08:41:31 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117727-2000.11.02-15.51.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Thu, Nov 02, 2000 at 12:34:19PM -0500, PEGASUSDAT@aol.com wrote:
> Enough of this nonsense about the modulation being in the grass.
> See the attached.

More mumbo jumbo.

"The spikes closest in are the carrier, which is not completely suppressed"
Huh? The carrier is not at all suppressed. Why pretend otherwise?

I say again sir: show us a modulating and demodulating circuit
and let us prove the technology for ourselves.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

15. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Thu, 2 Nov 2000 14:03:24 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117728-2000.11.02-16.13.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

hamish,

You can get a development board for $125 US plus shipping at

http://www.ikn.com/solutions/kits/xilinx/spartan-ii.html

I just ordered one today. I used my VISA card, expect shipment in two
weeks.

I have no connection with Insight.

73,

Lyle

> It'd be better if some more of the prototype

> board vendors had Spartan-II boards. One supplier wrote back
> to me that they didn't intend to do a Spartan-II board because
> the Xilinx Student Edition (2.1) didn't support that chip --
> but now the software's free the situation is different.
>
>
> thanks,
>
> Hamish

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

16. [ss] Re: Looking for FPGA design software

From: Douglas Bradford <DGBradford@worldnet.att.net>
Date: Thu, 02 Nov 2000 09:12:16 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117736-2000.11.02-17.26.04--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Altera's Max+Plus II software package is free, but only works for 6 months,
>then it is $2,000/annum. Sigh. Too bad, they have some good parts (6000
>family) that are fairly cheap.

We have no problem renewing the FREE Altera software every six months. In
fact they send us an email reminder to do so. It seems they are more
interested in selling lots of FPGA's than software. This software is a full
featured VHDL and schematic capture design compiler.

Head Electron Slinger,
Doug - WD6DGH

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

17. [ss] NO MORE &^%&^* attachments! (was: Grass)

From: Tony Langdon <tlangdon@atctraining.com.au>
Date: Fri, 3 Nov 2000 10:59:17 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117748-2000.11.02-18.09.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I don't see anything. Why don't you mail it directly to Phil
> instead of
> wasting bandwidth sending it to everybody?

Oh, I'm enjoying the debate, but can't everyone take the hint (actually,
obvious suggestion, which has been spelled out in detail on at least two
separate occasions) to present the information on a web site, and post the
URL, like Phil does. No more of those *&^%*^%&*^% Word attachments, PLEASE!
It's a major hassle (by design) to recover Word documents, due to our email
security syste, here.

And if you don't have a web site you want to use, I'm sure Geocities or one
of zillions of other free hosting services would happily oblige. :-)

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

18. [ss] Re: Grass

From: Phil Karn <karn@ka9q.net>
Date: Thu, 2 Nov 2000 18:37:46 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,
        frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
        pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
        dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-117773-2000.11.02-20.49.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

>Enough of this nonsense about the modulation being in the grass.
>See the attached.

What exactly is this plot supposed to prove? It's well known that
non-random data sequences give different modulation spectra than do
random sequences. The same 0101... sequence fed to an ordinary BPSK
modulator with the usual baseband filtering will result in a spectrum
with two spectral line components at Fc +/- 1/2 the data rate, where
Fc is the frequency of the suppressed carrier. This is not at all
surprising. It's exactly what the theory says I should get.

If I then removed one of the BPSK sidebands I suppose I could claim
infinite bits/sec/Hz in the remaining one. But this would be
meaningless because there is no information content whatsoever in a
fully predictable repeating 010101... sequence. Go back and re-read
the first part of Shannon's paper, the part dealing with the entropy
of a source.

Modem spectral plots made with anything but random user data are
meaningless.

Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

19. [ss] Double bit Rate of DS-CDMA

From: Dheeny Primadi Sentosa <dheeny@usa.net>
Date: 2 Nov 00 20:20:57 MST
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117776-2000.11.02-21.33.20--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If i had a method to double the bit rate of a DS-CDMA, without changing the
processing gain, bandwidth, and total number of user.

Tell me what do you all think.

bYe

_____
Get free email and a permanent address at http://www.netaddress.com/?N=1

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

20. [ss] Re: I don't like the way you guys advertise so much on Taper.

From: David Kelly <dkelly@hiwaay.net>
Date: Thu, 02 Nov 2000 22:16:58 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: mkting@digital-wireless.com
Message-ID: <LYR6751-117783-2000.11.02-22.26.54--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I've let this sit too long before throwing in my two bits.

"Paul McInnish" writes:
> Ed Doubek, you, my friend, are out of line!
[...]
> Best 73 to all!
>
> Paul McInnish - K4BET
> Manager, Business Development
> Digital Wireless Corp.
> 5375 Oakbrook Parkway
> Norcross, GA 30093, USA
> Direct Pho: 678.684.2011
> Main Pho: 678.684.2000
> Fax: 678.684.2001
> Cellular Phone: 678.429.2124
>
> E-mail: k4bet@digital-wireless.com

> http://www.digital-wireless.com
>
> ----- Original Message -----
> From: "ED DOUBEK" <Docom@worldnet.att.net>
> To: <mkting@digital-wireless.com>; <n9rf@arrl.net>
> Sent: Tuesday, October 24, 2000 7:40 AM
> Subject: I don't like the way you guys advertise so much on Taper.
>
>
> : I don't like the way Paul Mcinnish keeps using Taper to halk your wares.
> : Let's tone it down a bit!
> :
> : Ed Doubek / N9RF

I've only rejoined this list about 6 weeks ago. At least during that
time Paul's behavior on this list has been that of a perfect gentleman.
The worst offense (a small one) is the large .signature. But unlike
large ASCII-art or alleged snippets of Windows code, Paul is provinding
lots more "how to contact me" information that I care to post about
myself.

The worst thing about Paul's and Phil's and -like posts to this list is
that we don't have about 10 or 20 more just like them.

--
David Kelly N4HHE, dkelly@hiwaay.net
==
The human mind ordinarily operates at only ten percent of its
capacity -- the rest is overhead for the operating system.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

21. [ss] Re: Grass

From: David Kelly <dkelly@hiwaay.net>
Date: Thu, 02 Nov 2000 22:19:04 -0600
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117784-2000.11.02-22.29.16--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

PEGASUSDAT@aol.com writes:
>
> Phil,
>
> Enough of this nonsense about the modulation being in the grass.
> See the attached.

[yet another huge WORD document deleted, unread]

The failure to cease posting huge non-portable documents to mailing
lists which do not actively encourage such actions is a gross violation
of etiquette.

One who doesn't understand something this simple can't be reasoned with.
One doesn't have to read the documents to reach at least a 2 sigma
certainty.

--
David Kelly N4HHE, dkelly@hiwaay.net
==
The human mind ordinarily operates at only ten percent of its
capacity -- the rest is overhead for the operating system.

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

22. [ss] Re: New WebPACK ISE V3.2i Released!

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Fri, 3 Nov 2000 23:10:22 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117847-2000.11.03-06.20.50--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

On Thu, Nov 02, 2000 at 02:03:24PM -0800, Lyle Johnson wrote:
> You can get a development board for $125 US plus shipping at
>
> http://www.ikn.com/solutions/kits/xilinx/spartan-ii.html
>
> I just ordered one today. I used my VISA card, expect shipment in two
> weeks.

Thanks for the info Lyle. I've seen their page before,
didn't realise the prices were so good. They don't seem to
have pricing on the web, and all of their ordering seems
to be via telephone.

Interestingly our local Xilinx distributor in Australia,
ACD (part of, or used to be part of, Memec) is now called Insight.
I wonder if they carry them locally.

So is $125 for the standard XC2S100 part? Not a bad deal.

73
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

23. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Fri, 3 Nov 2000 07:14:09 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117868-2000.11.03-09.24.02--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hamish,

> Interestingly our local Xilinx distributor in Australia,
> ACD (part of, or used to be part of, Memec) is now called Insight.

Same company,

> So is $125 for the standard XC2S100 part? Not a bad deal.

That's for the development board. The parts are around $20 for the 150,000
gate device.

73,

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

24. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Fri, 3 Nov 2000 07:34:12 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117873-2000.11.03-09.44.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I should probably be clearer.

> > Interestingly our local Xilinx distributor in Australia,
> > ACD (part of, or used to be part of, Memec) is now called Insight.
>
> Same company,

or (was) part of the same company/group. The group is being split up, or it
may have been already - this was "in process" the last time I spoke with
them about this topic, which was several weeks ago. The development board
is a product of Insight/Memec.

> > So is $125 for the standard XC2S100 part? Not a bad deal.
>
> That's for the development board. The parts are around $20 for
> the 150,00 gate device.

That is for the development board with the 100,000 gate device soldered on.

73,

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

25. [ss] Re: Grass (of a different kind?)

From: Brett Glass <brett@lariat.org>
Date: Fri, 03 Nov 2000 12:12:50 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117899-2000.11.03-13.22.58--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

At 10:34 AM 11/2/2000, PEGASUSDAT@aol.com wrote:

> Phil,
>
>Enough of this nonsense about the modulation being in the grass.
>See the attached.

The modulation is most definitely in the grass, of which you appear
to have been smoking quite a bit too much. ;-) In fact, it has
apparently impaired your judgement so much that you have repeated
the indiscretion of sending large attachments in proprietary formats
to the mailing list.

--Brett Glass

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

26. [ss] Re: Grass

From: Dale Heatherington <dale@wa4dsy.net>
Date: Fri, 3 Nov 2000 15:59:22 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117916-2000.11.03-15.14.06--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

101010101 as test data ?!!!
I suspect when random data is used the
vmsk low bandwidth illusion/delusion will evaporate.

--
Dale Heatherington
dale@wa4dsy.net
Web Page http://www.wa4dsy.net
Sent by KMail for Linux

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

27. [ss] Re: New WebPACK ISE V3.2i Released!

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sat, 4 Nov 2000 09:33:30 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117930-2000.11.03-16.43.36--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Nov 03, 2000 at 07:14:09AM -0800, Lyle Johnson wrote:
> > So is $125 for the standard XC2S100 part? Not a bad deal.
>

> That's for the development board. The parts are around $20 for the 150,000
> gate device.

Sorry, I meant is that $125 for the development board with XC2S100 fitted?
(XC2S100 being the standard part according to the web page.)

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

28. [ss] Re: New WebPACK ISE V3.2i Released!

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sat, 4 Nov 2000 09:38:08 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-117931-2000.11.03-16.48.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Sat, Nov 04, 2000 at 09:33:30AM +1100, Hamish Moffatt wrote:
> Sorry, I meant is that $125 for the development board with XC2S100 fitted?
> (XC2S100 being the standard part according to the web page.)

Already answered in your other email. Thanks Lyle.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

29. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Steven R. Bible" <srbible@gate.net>
Date: Sat, 4 Nov 2000 19:36:04 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-118164-2000.11.04-20.47.29--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Lyle,

I have this development kit in hand. I have not had time to work with it
due to the move. I ordered it with Xilinx Foundation.

- Steve, N7HPR

> -----Original Message-----
> From: bounce-ss-5189@lists.tapr.org
> [mailto:bounce-ss-5189@lists.tapr.org]On Behalf Of Lyle Johnson
> Sent: Thursday, November 02, 2000 3:03 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: New WebPACK ISE V3.2i Released!
>
>
> hamish,
>
> You can get a development board for $125 US plus shipping at
>
> http://www.ikn.com/solutions/kits/xilinx/spartan-ii.html
>
> I just ordered one today. I used my VISA card, expect shipment in two
> weeks.
>
> I have no connection with Insight.
>
> 73,
>
> Lyle
>
> > It'd be better if some more of the prototype
> > board vendors had Spartan-II boards. One supplier wrote back
> > to me that they didn't intend to do a Spartan-II board because

> > the Xilinx Student Edition (2.1) didn't support that chip --
> > but now the software's free the situation is different.
> >
> >
> > thanks,
> >
> > Hamish
>
>
>
>
> ---
> You are currently subscribed to ss as: srbible@gate.net
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

30. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Sat, 4 Nov 2000 19:19:04 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-118175-2000.11.04-21.29.07--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Steve!

Yes, I recall this. Unfortunately, Xilinx doesn't offer it with the "cheap"
foundation series anymore (the $95 one) - that edned with the 2.1i release
of Foundation.

But with the free WebPACK software, the new version may be an even better
deal.

I'm looking forward to getting my eval board from Insight.

73,

Lyle

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Steven R. Bible
> Sent: Saturday, November 04, 2000 6:36 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: New WebPACK ISE V3.2i Released!
>
>
> Lyle,
>
> I have this development kit in hand. I have not had time to work with it
> due to the move. I ordered it with Xilinx Foundation.
>
> - Steve, N7HPR
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

31. [ss] webpack

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Wed, 8 Nov 2000 00:12:46 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-118545-2000.11.07-07.23.22--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The WebPack software looks very good. I prefer the project navigator
to the one shipped with Foundation, possibly even to the one
shipped with Alliance. I synthesised some simple code I wrote
for a university assignment just fine with XST, the built in
synthesis tool, and routed it for an XC2S100-5-PQ208 without

a problem. All for free!

So, free FPGA tools are looking up...! And the Insight
board is quite reasonably priced.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

32. [ss] RE: webpack

From: "Lyle Johnson" <wa7gxd@email.msn.com>
Date: Wed, 8 Nov 2000 09:45:03 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-118719-2000.11.08-11.55.09--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hamish,

The Insight board came yesterday - they said two weeks and took about two
days. Faster than ballots can be counted in Florida!

Anyway, the quality looks good. The rev level of the silicon appears to be
"ES" - engineering sample - so there may be some gotcha's in it.

Hope to get it fired up in the next couple days and see that it works, then
I'll start using it to prorotype some logic for the LEAST satellite project
and perhaps some RUDAK digital groundstation modem design work.

73,

Lyle

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Hamish Moffatt
> Sent: Tuesday, November 07, 2000 5:13 AM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] webpack
>
>
>
> The WebPack software looks very good. I prefer the project navigator
> to the one shipped with Foundation, possibly even to the one
> shipped with Alliance. I synthesised some simple code I wrote
> for a university assignment just fine with XST, the built in
> synthesis tool, and routed it for an XC2S100-5-PQ208 without
> a problem. All for free!
>
> So, free FPGA tools are looking up...! And the Insight
> board is quite reasonably priced.
>
>
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>
>
> ---
> You are currently subscribed to ss as: wa7gxd@email.msn.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

33. [ss] Re: VMSK Plot

From: Phil Karn <karn@ka9q.net>
Date: Fri, 10 Nov 2000 18:53:52 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Cc: ss@lists.tapr.org, ednstrassberg@cahners.com, dbabitch@atmel.com,

frussle@erols.com, pete@nolan-jaska.com, feherk@yahoo.com,
pbender@qualcomm.com, ftirpak@maximsys.com, silage@astro.temple.edu,
dag@world.std.com, MRJUDD@aol.com, MMMEI@aol.com
Message-ID: <LYR6751-119073-2000.11.10-21.05.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Hi Hal,

I see you have been hard at work repopulating the www.vmsk.org
website. Today I see you have added a rebuttal of my critique as

http://www.vmsk.org/VMSK%20Delusion.htm

However, I did not see any links from your page to mine, so the reader
is not given an easy way to access what you are answering.

As you know, I have placed links to your pages from my own. How about
returning the favor? I assume you'd want everyone to have both sides
of the story, no?

Phil

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

34. [ss] Re: VMSK Plot

From: "CliffK" <su3722@eclipse.co.uk>
Date: Mon, 13 Nov 2000 11:14:26 -0000
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-119416-2000.11.13-05.22.57--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Phil,

u r mistaken- my name is not HAL (i am feeling a lot better though Dave
;-)).
I have subscribed to TAPR spread spectrum group as part of my interes in
Amradio (specialist modes).

regards

CliffK
G7JDZ

p.s. keep up the vociferous debates!!

----- Original Message -----
From: Phil Karn <karn@ka9q.net>
To: TAPR Spread Spectrum Special Interest Group <ss@lists.tapr.org>
Cc: <ss@lists.tapr.org>; <ednstrassberg@cahners.com>; <dbabitch@atmel.com>;
<frussle@erols.com>; <pete@nolan-jaska.com>; <feherk@yahoo.com>;
<pbender@qualcomm.com>; <ftirpak@maximsys.com>; <silage@astro.temple.edu>;
<dag@world.std.com>; <MRJUDD@aol.com>; <MMMEI@aol.com>
Sent: Saturday, November 11, 2000 2:53 AM
Subject: [ss] Re: VMSK Plot

> Hi Hal,
>
> I see you have been hard at work repopulating the www.vmsk.org
> website. Today I see you have added a rebuttal of my critique as
>
> http://www.vmsk.org/VMSK%20Delusion.htm
>
> However, I did not see any links from your page to mine, so the reader
> is not given an easy way to access what you are answering.
>
> As you know, I have placed links to your pages from my own. How about
> returning the favor? I assume you'd want everyone to have both sides
> of the story, no?
>
> Phil
>
> ---
> You are currently subscribed to ss as: su3722@eclipse.co.uk
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

35. [ss] Connectors?

From: Bob Lorenzini <hwm@ns.newportharbornet.com>
Date: Wed, 15 Nov 2000 16:39:24 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-119881-2000.11.15-18.49.32--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Is it possible to purchase a antenna connector for the Proxim wireless
ethernet access point?

Bob - wd6dod

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

36. [ss] Re: Connectors?

From: Steve Lampereur <kb9mwr@yahoo.com>
Date: Sat, 18 Nov 2000 17:44:37 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-120328-2000.11.18-19.55.26--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I beleive they use the same "SMB" connector as on
their other wireless NIC's ..

See:

http://www.molex.com/product/rf/smb.html

>Is it possible to purchase an antenna connector for
>the Proxim wireless ethernet access point?
>
>Bob - wd6dod

Steve, kb9mwr

_____
Do You Yahoo!?
Yahoo! Calendar - Get organized for the holidays!
http://calendar.yahoo.com/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

37. [ss] Spreadspectrum from scratch (AD hoc networks) Invention

From: "Hamoperator SM7UGT Marcel bos" <sm1ugt@hotmail.com>
Date: Tue, 21 Nov 2000 16:33:25
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-120751-2000.11.21-10.44.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have let some things go in patent pending status - by here I need
some enthusiastic people intrested in software based spreadspectrum
to contribute with materials around my idea. If possible I will meet
up anywhere in the world.

To the ones who recognize this - It is One step futher..

Email me at marcel.bos@abc.se

_____
Get more from the Web. FREE MSN Explorer download : http://explorer.msn.com

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

December 2000

Original source file: ss.0012
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/spread-spectrum-sig/mail_archive/ss.0012

1. [ss] from RF Globnet

From: Also-Antal Csaba <antalcs@mail.matav.hu>
Date: Fri, 08 Dec 2000 07:16:44 +0100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-123452-2000.12.08-00.28.59--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

3) WJ Sets New Standard for Wireless Data Rate Transmission
WJ Communications announced that scientists at its R&D labs have
developed and proven that the
theoretical limit postulated by renowned mathematician C.E. Shannon can
be exceeded with hardware
and software developed at the company. WJ research has demonstrated a
data transmission rate of up
to 155 Mbit per second occupying bandwidth of less than 4 MHz.
http://www.rfglobalnet.com/read/nl20001205/372657

udv
Csaba

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

2. [ss] RE: from RF Globnet

From: "Hast, Chuck" <wchast@utilpart.com>
Date: Fri, 8 Dec 2000 07:11:32 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-123480-2000.12.08-06.24.03--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Boy these guys never learn!!

Look at this extract from the web page given below....

-------------NOTE READING THIS MAY WARP YOUR BRAIN

The creation of extra-dimensionality between transmitter and receiver is
achieved by properly sampling the wavefield space created by the multipath
propagation environment.

Sounds like something out of a Star Trek movie....

> -----Original Message-----
> From: Also-Antal Csaba [SMTP:antalcs@mail.matav.hu]
> Sent: Friday, December 08, 2000 01:17
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] from RF Globnet
>
>
> 3) WJ Sets New Standard for Wireless Data Rate Transmission
> WJ Communications announced that scientists at its R&D labs have
> developed and proven that the
> theoretical limit postulated by renowned mathematician C.E. Shannon can
> be exceeded with hardware
> and software developed at the company. WJ research has demonstrated a
> data transmission rate of up
> to 155 Mbit per second occupying bandwidth of less than 4 MHz.
> http://www.rfglobalnet.com/read/nl20001205/372657
>
> udv
> Csaba
>
>
> ---
> You are currently subscribed to ss as: wchast@utilpart.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

>
****
This e-mail and any files transmitted with it are confidential and are
intended solely for the use of the individual or entity to whom it is
addressed. If you have received this transmission in error, please notify
the sender immediately and destroy any hard copies you may have printed and
remove all copies of the e-mail from your hard drive. Opinions, conclusions
and other information in this message that do not relate to the official
business of Utility Partners, Inc shall be understood as neither given nor
endorsed by it.

Visit us on the web at www.utilpart.com
****

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

3. [ss] RE: from RF Globnet

From: "Kenneth H. Sinclair" <khs@ieee.org>
Date: Fri, 8 Dec 2000 08:16:30 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-123510-2000.12.08-07.36.17--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is an accepted technique that sounds very similar to BLAST. There's
probably a patent battle looming here somewhere. The comments about
exceeding Shannon are hyperbolic, though. The technique creates multiple
channels between transmitter/receiver (following different reflection
paths), but within each channel Shannon applies.

The technique is paradoxical in that it only works in multipath
environments, and degrades in better conditions.

> -----Original Message-----
>
> Boy these guys never learn!!
>
> Look at this extract from the web page given below....
>
> -------------NOTE READING THIS MAY WARP YOUR BRAIN
> ----------
> The creation of extra-dimensionality between transmitter and receiver is
> achieved by properly sampling the wavefield space created by the multipath
> propagation environment.
> ----------
> ----------
>
> Sounds like something out of a Star Trek movie....

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

4. [ss] Re: from RF Globnet

From: Brett Glass <brett@lariat.org>
Date: Fri, 08 Dec 2000 11:52:04 -0700
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-123591-2000.12.08-13.03.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Accentuate the positive, eliminate the negative, divert the
photon flux to the quantum antimatter converter, and transmit
on my order. Kirk out.

--Brett

At 11:16 PM 12/7/2000, Also-Antal Csaba wrote:

>3) WJ Sets New Standard for Wireless Data Rate Transmission
>WJ Communications announced that scientists at its R&D labs have
>developed and proven that the
>theoretical limit postulated by renowned mathematician C.E. Shannon can
>be exceeded with hardware

>and software developed at the company. WJ research has demonstrated a
>data transmission rate of up
>to 155 Mbit per second occupying bandwidth of less than 4 MHz.
>http://www.rfglobalnet.com/read/nl20001205/372657
>
>udv
>Csaba
>
>
>---
>You are currently subscribed to ss as: BRETT@LARIAT.ORG
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

---
You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

5. [ss] RE: from RF Globnet

From: "Chuck Hast" <kp4djt@tampabay.rr.com>
Date: Fri, 08 Dec 2000 17:55:04 -0500
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-123628-2000.12.08-17.06.39--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

OK, so they are doing a form of parallel transmission, that I have worked
with, all of that gobldygonck on the web page sure made it sound like more
snake oil.

On Fri, 8 Dec 2000 08:16:30 -0500, Kenneth H. Sinclair wrote:

>This is an accepted technique that sounds very similar to BLAST. There's
>probably a patent battle looming here somewhere. The comments about
>exceeding Shannon are hyperbolic, though. The technique creates multiple
>channels between transmitter/receiver (following different reflection
>paths), but within each channel Shannon applies.
>
>The technique is paradoxical in that it only works in multipath
>environments, and degrades in better conditions.
>
>
>   -----Original Message-----
>
>   Boy these guys never learn!!
>
>   Look at this extract from the web page given below....
>
>   -------------NOTE READING THIS MAY WARP YOUR BRAIN
>   ----------------------------
>   The creation of extra-dimensionality between transmitter and receiver is
>   achieved by properly sampling the wavefield space created by the multipath
>   propagation environment.
>   --
>   ---------------------------------------
>
>   Sounds like something out of a Star Trek movie....
>
>
>---
>You are currently subscribed to ss as: kp4djt@tampabay.rr.com
>To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

Chuck Hast   e-mail   kp4djt@tampabay.rr.com

   ---- FPAC ----
www.qsl.net/fpac/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

6. [ss] Narrow-band Interference

From: Abdul Majid <abdul_majid@excite.com>
Date: Tue, 19 Dec 2000 07:40:33 -0800 (PST)
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-125403-2000.12.19-10.22.51--lyris.ss#tapr.org@lists.tapr.org>

Rendered body type: text/plain

Hello !

r(k) = s(k)+i(k)+n(k) ;

$$i(k) =\sim \sum_{a=1}^{M} Q(a)r(k-a)$$

(Forward linear predictor)
How this summation can be predicted the interference in
the signal.
where
1) s(k) is wideband signal
2) i(k) is narrow-band interference
3) n(k) is White noise

Please reply positively.

_____
Send a cool gift with your E-Card
http://www.bluemountain.com/giftcenter/

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

7. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@fidalgo.net>
Date: Fri, 29 Dec 2000 19:53:27 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-127022-2000.12.29-22.06.18--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I just found this link

http://www.burched.com.au/bedspartan2.html

This is for the 200,000 Gate Spartan-II chip assembled on an eval board, for
about 4120 US. Hamish, it is a firm in Oz, so should be convenient for you,
too :-)

I got my board from Insight, now I just need time to fire it up :-(

Regards,

Lyle

> -----Original Message-----
> From: bounce-ss-14410@lists.tapr.org
> [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Lyle Johnson
> Sent: Saturday, November 04, 2000 7:19 PM
> To: TAPR Spread Spectrum Special Interest Group
> Subject: [ss] Re: New WebPACK ISE V3.2i Released!
>
>
> Hi Steve!
>
> Yes, I recall this. Unfortunately, Xilinx doesn't offer it with
> the "cheap"
> foundation series anymore (the $95 one) - that edned with the 2.1i release
> of Foundation.
>
> But with the free WebPACK software, the new version may be an even better
> deal.
>
> I'm looking forward to getting my eval board from Insight.

>
> 73,
>
> Lyle
>
> > -----Original Message-----
> > From: bounce-ss-14410@lists.tapr.org
> > [mailto:bounce-ss-14410@lists.tapr.org]On Behalf Of Steven R. Bible
> > Sent: Saturday, November 04, 2000 6:36 PM
> > To: TAPR Spread Spectrum Special Interest Group
> > Subject: [ss] Re: New WebPACK ISE V3.2i Released!
> >
> >
> > Lyle,
> >
> > I have this development kit in hand. I have not had time to
> work with it
> > due to the move. I ordered it with Xilinx Foundation.
> >
> > - Steve, N7HPR
> >
>
>
>
>
> ---
> You are currently subscribed to ss as: wa7gxd@email.msn.com
> To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org
>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

8. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@fidalgo.net>
Date: Fri, 29 Dec 2000 20:01:31 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-127023-2000.12.29-22.14.21--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Oops...

> I just found this link
>
> http://www.burched.com.au/bedspartan2.html
>
> This is for the 200,000 Gate Spartan-II chip assembled on an eval
> board, for
> about 4120 US. Hamish, it is a firm in Oz, so should be

  about $120 US.

> convenient for you,
> too :-)

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

9. [ss] Re: New WebPACK ISE V3.2i Released!

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sat, 30 Dec 2000 16:40:24 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-127032-2000.12.29-23.52.45--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Dec 29, 2000 at 07:53:27PM -0800, Lyle Johnson wrote:
> This is for the 200,000 Gate Spartan-II chip assembled on an eval board, for
> about 4120 US. Hamish, it is a firm in Oz, so should be convenient for you,
> too :-)

Thanks for the heads-up Lyle. I've been in touch with Tony Burch already
a few times via email, about six months ago. At that time he wasn't
really considering a Spartan II board, but next thing I hear it's
shipping!

I emailed a few other places six months ago and some said they wouldn't
do a Spartan board because it wasn't support by the Xilinx Student
Edition. No longer an issue with the free WebPack stuff.

cheers,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

10. [ss] Re: New WebPACK ISE V3.2i Released!

From: "Lyle Johnson" <wa7gxd@fidalgo.net>
Date: Fri, 29 Dec 2000 22:34:54 -0800
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-127045-2000.12.30-00.47.48--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

> I emailed a few other places six months ago and some said they wouldn't
> do a Spartan board because it wasn't support by the Xilinx Student
> Edition. No longer an issue with the free WebPack stuff.

And I understand things, the Student Edition 2.1 ($55) does Spartan-II to
150K gates (but not 200k) and also does one of the smaller Virtex parts.
The context of the message was that the 2.1 Student Edition may have a
better VHDL synthesis engine than the Webpack.

Regards,

Lyle

You are currently subscribed to ss as: lyris.ss@tapr.org
To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org

11. [ss] Re: New WebPACK ISE V3.2i Released!

From: Hamish Moffatt <hamish@cloud.net.au>
Date: Sat, 30 Dec 2000 18:07:24 +1100
To: "TAPR Spread Spectrum Special Interest Group" <ss@lists.tapr.org>
Message-ID: <LYR6751-127049-2000.12.30-01.19.44--lyris.ss#tapr.org@lists.tapr.org>
Rendered body type: text/plain

On Fri, Dec 29, 2000 at 10:34:54PM -0800, Lyle Johnson wrote:
> > I emailed a few other places six months ago and some said they wouldn't
> > do a Spartan board because it wasn't support by the Xilinx Student
> > Edition. No longer an issue with the free WebPack stuff.
>
> And I understand things, the Student Edition 2.1 ($55) does Spartan-II to
> 150K gates (but not 200k) and also does one of the smaller Virtex parts.
> The context of the message was that the 2.1 Student Edition may have a
> better VHDL synthesis engine than the Webpack.

The Student Edition has FPGA Express. The WebPack has Xilinx's own XST
("Xilinx Synthesis Technology" from memory.), which is not as good (I think).
I suppose Synopsys wasn't interested in giving FE away, not surprisingly.

I wonder if they have a 3.1 Student Edition. Confusingly, our Alliance
3.1i package at work came with a Synplify demo CD!

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

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To unsubscribe send a blank email to leave-ss-6751T@lists.tapr.org